

**Examining the Process and the Outcomes of a 12-month Learning Journey of
Intercollegiate Sport Coaches Accompanied by a Personal Learning Coach**

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Abstract

The purpose of this doctoral dissertation was to advance the scientific knowledge on the development of high-performance coaches by proposing a new developmental approach to help intercollegiate sport coaches learn from their coaching practice. When applied to coach development, the theory of lifelong learning (Jarvis, 2006) suggests that coach learning evolves with the coaches' experiences and develops from participating in the environment. However, current development opportunities for high-performance coaches lack connection with practice and forego reflective practice.

This lead researcher thus set out to undertake a 12-month action research operationalised using appreciative inquiry to accompany intercollegiate sport coaches along their learning journey. A personal learning coach accompanied five intercollegiate sport coaches using narrative-collaborative coaching (NCC) to create a safe space for them to reflect. The findings are presented across four articles.

The first article suggested reflective cards as a useful tool for coaches to engage in reflective practice. Findings from Article One also presented a model for other coaches to reflect on their coaching practice. Article Two described the main components of NCC, which was used by the personal learning coach to create a safe reflective space. A step-by-step methodology for using appreciative inquiry is presented. In Article Three, data generated from the journey of a female high-performance women's rugby coach was used to extend the definition of a personal learning coach and to compare the role of PLC with other coach development actors. Findings about the evolution and the value creation of the accompanied learning journey are also presented. Article Four shared results specific to the intercollegiate context with the presentation of the companionship between a PLC and two intercollegiate ice hockey head coaches. These

collaborative partnerships led to unique learning journeys, and created valuable learning activities within complex value creation stories.

The four articles together make novel theoretical and practical contributions to the field of coach development by presenting a new developmental approach to accompany coach learning and by introducing an analytical framework to evaluate the value of learning activities.

Keywords: Lifelong learning; coach development; coach learning; high-performance; action research; appreciative inquiry; narrative-collaborative coaching; developmental coaching; personal coach;

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Statement of Contribution

I, François Rodrigue, was responsible for organising the research design, collecting and analysing all the data, and for writing every section of this dissertation. Dr. Pierre Trudel reviewed and edited all parts of this dissertation, including the four articles. The design of this action research operationalised using appreciative inquiry was modified following my dissertation proposal defense, thanks to comments provided by Dr. Diane Culver and Dr. Bettina Callary as member of the thesis committee. Dr. Trudel also provided valuable feedback during our bi-monthly meetings, which helped me to examine my experience of leading this action research. Therefore, the contribution of Dr. Pierre Trudel are of conceptual and counselling nature. Additionally, Dr. Culver provided feedback on the use of the Value Creation Framework and assisted the creation of the associated interview guide. This contribution resulted in her addition as an author for one of the four manuscripts. I also want to acknowledge the contribution of other members of the thesis committee – Dr. Bettina Callary, Dr. Martin Camiré, and Dr. Martin Roy – in addition to the contribution of external evaluators who participated in the review process of the four articles. Finally, considering that data were generated through an action research, I want to recognise the contribution of the participating coaches who directly contributed to many aspects of the research.

Chapter 1: Introduction

Introduction

With international and professional sport competitions collecting billions in revenue globally, high-performance (HP) sport is an industry in which significant investments are made. In Canada, public organisations concerned with HP sport and its stakeholders manage more than 220 million dollars each year (Government of Canada, 2017). This amount excludes any investment made by major North American professional sport leagues and teams that collect billions of dollars in revenue each year from its stakeholders (e.g., the National Hockey League, Toronto Raptors). While most of the money is invested in the development of athletes, comparatively little attention is directed to the development of HP coaches (Lafrenière, 2015; Nash, Sproule, & Horton, 2017). This disparity is curious considering that quality coaching directly influences the development of athletes and their performances.

Although there are similarities in the career progression of HP coaches (Erickson, Côté, & Fraster-Thomas, 2007), their learning pathways are unique (Mallett, 2010; Werthner & Trudel, 2009). When given autonomy, HP coaches have difficulty focusing on their development and learning. The main reason seems to be the urgency to win that characterises their coaching context (Mallett, Rossi, Rynne, & Tinning, 2016; Trudel & Gilbert, 2013). For this reason, HP coaches may not make time for, or select the learning activities that they need, even though they should be lifelong learners (Lara-Bercial & Mallett, 2016; Vallée & Bloom, 2016).

Research Purpose

The purpose of this doctoral dissertation was to advance the scientific knowledge on the development of HP coaches by proposing a new developmental approach to help intercollegiate sport coaches learn from their coaching practice. In this approach, a personal learning coach (PLC) interacts with an HP coach to guide the dyad in co-creating a safe reflective space as well

as meaningful learning situations that can help a coach become a *deliberate reflective practitioner* (Trede & McEwen, 2016; Trudel & Gilbert, 2013).

Research questions

Two research questions were central to achieving the research purpose : (a) How does the personal learning journey of full-time intercollegiate sport coaches evolve when they are accompanied by a PLC?; and (b) What types of value are co-created by coaches and a PLC when they participate in a 12-month action research?

Ontology

The ontological paradigm of this doctoral dissertation is participatory. A participative reality means that there is a “subjective-objective reality, cocreated by mind and given cosmos” (Lincoln, Lynham, & Guba, 2018, p. 111). In other words, there are objective truths that need to be observed by researchers and inherent subjective interpretations made by researchers that influence the understanding of knowledge and experiences. Therefore, meaning develops from interactions with the world around us, and results from a co-creative process taking place between participants that live experiences or challenge current knowledge.

Epistemology

The participatory paradigm laid out by Heron and Reason (1997) and updated by Lincoln and colleagues (2018) have guided the structure of this dissertation. This perspective considers that reality is created in collaboration, and that interpretation is both subjective and objective. The epistemological principle of the participatory paradigm dictates that findings are co-created from experiential, propositional, and practical knowledge (Lincoln et al., 2018).

From this perspective, participants’ perceptions of their experience, their personal reflections, and their knowledge learned in practice are all valuable to research. There is not one

single way of seeing the world in the participatory paradigm due to the multiple sources of knowledge creation, and the central role of interactions; instead, there are multiple theories (pairs of glasses) that make us see the world differently (Wenger-Trayner, 2013).

This research paradigm aligns with the field of sport coaching and coach development. Coaching effectiveness relies on interpersonal knowledge, intrapersonal knowledge, and professional knowledge (Côté & Gilbert, 2009) that ultimately have an influence through relationships inherent to the coaching profession. In other words, skills and knowledge related to sports coaching are not universal truths that can be found in nature as they are, but rather they are co-created interpretations of the world that are developed through its actors' participation in the domain. Coaching knowledge is, always has been, and will remain the product of co-creation between practitioners experiencing the world of sport (Jones, Edwards, & Viotto Filho, 2016).

As North (2013) explained, the philosophical underpinning of coaching research colours the findings of studies and these findings all make sense through the adopted philosophical perspective. I acknowledge that this doctoral dissertation adopts a particular philosophical perspective, which inevitably colours the conclusions. I also acknowledge that other philosophical perspectives of coaching (e.g., Abraham, Collins, & Martindale, 2006) and coach development (e.g., Sawiuk, Taylor, & Groom, 2018; Vella, Crowe, & Oades, 2013) could highlight other important elements of coach learning for example.

The aim of this coach learning research was to examine the process, and the outcomes of personal coaching for the development of intercollegiate sport coaches. Therefore, a qualitative methodology was deemed appropriate since this research adopted a participatory perspective and was designed to provide contextualised details about the creation of value generated by accompanied coach learning.

Dissertation Breakdown

This doctoral dissertation is divided into eight chapters. The current chapter outlines the purpose and questions that underpin this doctoral dissertation. In Chapter 2, I present the theoretical framework by describing the theory of lifelong learning (Jarvis, 2006). Chapter 3 details a State-of-the-Art review of the HP coach development literature to illustrate the state of research at the time of authoring this doctoral dissertation. Fourth, I describe the context of intercollegiate athletics in Canada to better portray, to readers of this dissertation, the reality experienced by Canadian intercollegiate full-time coaches. Fifth, the methodology used for this qualitative research is described. Sixth, the four scientific manuscripts that were accepted or submitted for publication are presented in the findings section. In Chapter 7, I share a discussion of the action research and its relationship with the main components of this dissertation regarding the learning of HP coaches. Finally in Chapter 8, I conclude with a reflection on the future of PLCs and HP coach learning.

Note on Gender

The use of the masculine gender in the text is used in place of all gender pronouns. The words he, his, and him when used to designate coaches can refer to any gender. This decision was taken for the sole objective of alleviating the text and easing comprehension.

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Chapter 2: Theoretical Framework

Theoretical Framework

My conception of high-performance (HP) coach development is that of a coach who embarks on an everlasting pursuit of growth as a person. This pursuit starts in his childhood, and it will not end as long as the coach is coaching (Callary, Werthner, & Trudel, 2012, 2013). The pursuit of an endless and holistic growth implies that coach development is about coaches becoming continuous learners: deliberate practitioners (Trede & McEwen, 2016). As this chapter highlights, the necessity for constant growth will only accelerate over the years due to the evolution of society. Therefore, I have adopted a perspective of coach development that focuses on the coach as a lifelong learner within the context of HP sport. This doctoral dissertation on HP coach development is based on the theory of lifelong learning (Jarvis, 2006).

Theory of Lifelong learning

There are many learning perspectives (such as behaviourist, cognitive, and experiential) described in the literature. It remains that each one of those learning perspectives will produce an incomplete interpretation of learning and using only one of these will produce incomplete interpretations of a phenomenon (Jarvis, 2006). Nonetheless, findings and interpretations from a single perspective can provide insights that enhance our knowledge of a specific phenomenon.

I chose Jarvis' (2006) theory of lifelong learning because it is recognised in the field of coaching research (e.g., Callary et al., 2012; Duarte & Culver, 2014; Trudel, Culver, & Richard, 2016), and offers a comprehensive integration of the factors that influence learning, suggesting that a person's growth is multifaceted and never completed (Jarvis, 2006). The study of learning must be complex and interdisciplinary because it is existential to human life. The same applies to the study of coach learning as demonstrated by the variety of research published in a large spectrum of coaching journals. For these reasons, the theory of lifelong learning was used for

developing the research questions, the design, and the analytical process of this doctoral dissertation.

Peter Jarvis wrote a trilogy of books, *Towards a comprehensive theory of human learning* (Jarvis, 2006), *Globalization, lifelong learning and the learning society* (Jarvis, 2007), and *Democracy, lifelong learning and the learning society* (Jarvis, 2008), in which he presented this theory. Jarvis (2006) suggested that living is learning, which then builds the foundation for further learning. In other words, all learning builds on prior learning.

The theory of lifelong learning is a comprehensive attempt to encapsulate the whole learning process of human beings. Jarvis (2006) defined lifelong learning as follows:

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

This definition suggests that the study of lifelong learning has to consider the individual as a whole (body and mind), while allowing room for considering multiple ways of living the human experience (thinking, acting, and feeling). Key concepts of Jarvis’ theory of lifelong learning are defined in Table 1, described in this section, and will be revisited throughout the doctoral dissertation.

Biography. A person’s current understanding of the world up until now composes that person’s biography. Learning occurs when the experiences of people lead them to modify their biographies. Learning is change, and a lack of change indicates the absence of learning.

Table 1

Elements of the Theoretical Framework

Theory of Lifelong Learning
Biography : <i>The person's current understanding of the world.</i>
Life-world : <i>The multiple dimensions of reality that a person experiences.</i>
Harmony : <i>A situation that is consistent with the person's current understanding of the world.</i>
Disjuncture : <i>A situation that is inconsistent with the person's current understanding of the world.</i>
Space : <i>Sensory experience and interactive experiences that happen in the physical and social space respectively.</i>
Culture : <i>Knowledge, skills, attitudes, beliefs, values and emotions that we, as human beings, have added to our biological base.</i>
Technology : <i>Technology simplifies access to information, enables real-time collaborations, and proliferates learning opportunities.</i>
Time : <i>The timing at which a person's lives an episodic experience.</i>
Thinking, Acting, & Feeling : <i>Ways of experiencing the world that could lead to changes (i.e., learning).</i>

Life-world. A person's life-world is the socio-cultural reality that that person is experiencing through any means. These multiple dimensions of reality influence the experiences that a person lives and thus initiates, or not, a process that may lead to change.

Harmony. In this process, changes are dependent on whether the experience is in *harmony* or not with the learner's biography. Harmony is a situation where people's experiences

are consistent with their biography, and in these cases, learning does not happen. For various reasons, some people are harmony seekers. They pursue the status quo intentionally or they naively nurture elements of their life-world that are consistent with their understanding.

Disjuncture. In contrast, disjuncture is “the gap between the individual’s biography and perception and construction of the experience of the external world” (Jarvis, 2006, p. 49). These episodic experiences challenge the learner’s biography. Such challenges stimulate learners to practise, memorise, or reflect. Regardless of whether it leads directly or indirectly to reflection, it is through reflections that learners decide to integrate this disjuncture, change their biography, and thus learn. Regarding the function of disjuncture, Jarvis said that a “feeling of disharmony with the life-world, a sense of disjuncture, remains the greatest learning need that individuals have so that they can return to the original state of harmony” (p. 78). The presence or absence of learning is always unilaterally dependent on the learner. It is the person who learns, or changes, after experiencing disjuncture. Educators cannot create learning, they can only create a meaningful environment for the learner to experience disjuncture, and then change (Page & Margolis, 2017).

Considering that learning is a process that is triggered, or not, by disjuncture and harmony respectively, a person’s experiences become a core element of their lifelong learning journey. Jarvis (2006) explained that experiences happen at the frontier between our self and our life-world. It is at this edge that people compare their internal world (biography) to their experience of the external world (life-world) and decide whether to change or not.

Space. The probability of situations creating learning is influenced by the space that surrounds the learner. Space has two components: physical space and social space (Jarvis, 2006). Physical space matters because learning is a sensory experience. The physical space impacts the

sensitivity of people to change. For instance, a physical environment, such as a room that is properly lit, heated, and quiet, is likely to positively influence the learner's perceptions of the stimulus received at the time he experiences the learning situation. In the past, physical distance was also a determinant of learning, but the proliferation of technology has made this constraint less restrictive today.

In a person's lifelong learning process, the social space influences learning because it determines the abundance and nature of interactions lived by a learner. Similar to physical proximity, proximity with individuals who possess specialised knowledge in an area in which the learner has a limited understanding can increase the likelihood of creating disjuncture regularly. A person's location within a culture also directly influences the meaning attributed to experiences. Therefore, the social space, whether it is proximity or culture, and the physical space impact the probability of experiencing disjuncture, and thus creating change.

Culture. Although learning at any level (individual, organisational, societal) ultimately occurs through individuals, society influences learning. Our entire life, although it is an individual venture, happens within a social context. Jarvis (2006) defined culture as "all the knowledge, skills, attitudes, beliefs, values and emotions that we, as human beings, have added to our biological base" (p. 55). This definition means that a culture is the product of a society, from which elements (e.g., a curriculum) are a product of culture. Social constituents outside of a person, such as their lifeworld, influence that person's maintenance of harmony or confrontation with disjuncture since these modulate that person's experiences. Nonetheless, a person's experience of the life-world and their desire to change is still an individual endeavour. The autonomy of an individual is always relative to the inter-subjective nature of their life-world.

Society, therefore, shapes learning through its culture and its members as it surrounds an individual's learning pathway.

Technology. Like never before, technology influences lifelong learning (Jarvis, 2007). The current discourse about technology is that it is positive because there are a proliferation of learning opportunities (Jarvis, 2007). Technology does indeed simplify access to information and enables real-time collaborations with people around the world. It also enables people to build on the work of others, or at least be informed of it, more easily. Learners also have access to markets of learning opportunities that were previously inaccessible. These characteristics increase the pace of change. Due to the pace of modern society and its ever-changing structure caused by ubiquitous competition, education is made accessible to learners throughout their life (Jarvis, 2007). Lifelong education should not only be made accessible through institutions; it should be accessible everywhere. The prevalence of technology facilitates connections between those individuals. Perhaps, the prevalence of technology is the reason continuing education, and learning, is awarded more attention in the world of research. What was once considered a decade worth of evolution is now a year worth of evolution.

Time. Time is rarely discussed and considered when examining learning. If change is dependent on the learner's biography, the timing at which a person lives an episodic experience influences the possibility of this experience creating a disjuncture or not. This explanation means that each episodic experience, regardless of its level of similarity with another experience, has a different impact on a person's learning when experienced at a different time. Life is experienced sequentially since time is linear and unalterable. A similar experience at a different time is a different learning opportunity since the learner's biography will have changed in the interim.

In addition, individuals cannot unlearn what they have learned. An episodic experience that is lived a second time, or is similar to a previous experience, will not be evaluated against the same biography, and will not have the same impact on the learner's learning. Interactions between our past (i.e., biography) and the present (i.e., experience) are unique instances that are never repeated, with the intent of changing for the future (i.e., learning).

Furthermore, the impact of time on learning is not only a matter of synchronicity, it is also a matter of leveraging various projections in time to create disjuncture. Learning can happen from interactions with the past, present, or future (Jarvis, 2006). In a way, individuals may learn from the past when they reflect. Contemplating previous experiences can help learners change as they analyse past events and individuals may also learn from the future when they plan. As we prepare to anticipate future events, we are perhaps changing our current understanding of the world by foreseeing the possible consequences of our actions. Additionally, individuals may learn from the present when they monitor their experiences. That is to say that the mind's conscious experience of the present can lead to changes in real time. Although the process of learning is informed by various moments in time, we must remember that learning always happens in the present.

Thinking, acting, and feeling. Jarvis (2006) presented three ways of experiencing the world that could lead to disjuncture: thinking, acting, and feeling. This typology has moved the discourse of learning forward since the educational paradigm often tends to prioritise thinking.

The cognitive dimension: thinking. The cognitive dimension of learning is composed of two main forms: knowing and thinking. When thinking, people can reflect or plan. As a form of thinking, reflection is a directed process used to review the past (Jarvis, 2006; Schön, 1984) while planning is a form of thinking that allows individuals to learn by anticipating the future.

Both these forms of thinking eventually lead learners to knowing. Knowing is the knowledge we have, the beliefs we hold, that help us to be, and become.

The pragmatic dimension: acting. Learning by doing is a way to experience a situation that leads individuals to change. We may perceive acting as practising a skill like, such as when athletes train, but it is not limited to that. Various actions can lead learners to create knowledge of what works for the learner; to create pragmatic knowledge, which is knowledge of something that works for the learner, but which might not work for all (Jarvis, 2006). The theory of lifelong learning also emphasised that acting is not necessarily conducive to learning, but that it must involve some form of thought to lead to learning. This role of intentionality in the learning process has been similarly highlighted as an essential element in the process of becoming a deliberate practitioner (Trede & McEwen, 2016).

The affective dimension: feeling. First, humans can experience situations through emotions. Experiencing a situation or looking at an object involves emotions that influence our reflection upon that experience. Second, emotions can drive our will to change. For instance, past experiences of failures might motivate us to improve, as observing other people perform may redefine our conception of limits, and explicit verbal encouragement from family, friends, or peers can instill a sense of confidence to do something that we did not dare to before. These events can increase our tendency to change, and thus learn. In other words, emotions “provide the motivation or pressure to act upon the experience” (Jarvis, 2006, p. 24). Regardless of the way learners are experiencing the world, Jarvis (2006) emphasised the importance of a person’s attitude towards learning for fostering a comprehensive engagement in the learning process. By definition, attitude is a person’s tendency to positively or negatively judge and act upon

situations. Effective lifelong learning perhaps needs prospective learners to consistently adopt a favourable and positive attitude towards disjuncture.

Summary

The theory of lifelong learning implies the need for a shift in the responsibility for professional development as it gives the responsibility of learning to the learner, instead of to administrators or instructors. Learners must choose to learn while administrators must “help develop a context that will maximize the effectiveness of the learner” (Novak, 2010, p. 7). Here is a sample list of characteristics of this transformation to the concept of lifelong learning (Jarvis, 2007):

- It is not the responsibility of the state;
- It is the responsibility of individuals to find and undertake it;
- It recognises the significance of practical knowledge;
- It acknowledges that learning is acquired outside of the educational institution and that it should be accredited in the same way as knowledge gained and tested within the educational institution;
- It recognises that society, or parts of it, are changing rapidly and so it is necessary for individuals to learn (adjust, be flexible) to cope with the precarious conditions of their daily lives;
- It occurs in an open market and learners can choose whatever provision suits their needs best (p. 67).

Learners are responsible for their own learning, which is part of an ever-changing society and not dependent on institutions. Organisations and workers often see learning as a commodity to offer

and sell, but it is the “individual learner’s responsibility to direct their own learning” (Jarvis, 2007, p. 142).

Discussing Jarvis’ work in relation to coach development, Trudel, Culver, and Richard (2016) stressed the need to consider the coach as an individual who is on a lifelong learning journey and who learns from participating in the world of contemporary coach development initiatives. These authors emphasised the role of biographical awareness in helping a coach learn professional knowledge, interpersonal knowledge, and intrapersonal knowledge (Gilbert & Côté, 2013). Considering that learning is impacted by space and time, we also recommended the creation of needs-based approach to support coach learning (Trudel, Gilbert, & Rodrigue, 2016). Although the consideration of lifelong learning has been said to be lacking in HP coach development and learning, we need to ask ourselves: What is the current state of the literature on the matter? This question is answered in Chapter 3.

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Chapter 3: Review of Literature

Review of Literature

Throughout the first decade of the 21st century, coach development research (the study of how coaches learn to coach) has largely focused on the developmental pathways of coaches and their sources of knowledge (Gilbert & Rangeon, 2011; Rynne, Mallett, & Tinning, 2009). For instance, coach development researchers have examined the learning pathway of Olympic coaches (Werthner & Trudel, 2009) and university sport coaches (Erickson, Côté, & Fraser-Thomas, 2007). Other studies have explored the types of sources coaches use and prefer to acquire coaching knowledge (e.g., Carter & Bloom, 2009; He, Trudel, & Culver, 2018; Irwin, Hanton, & Kerwin, 2004).

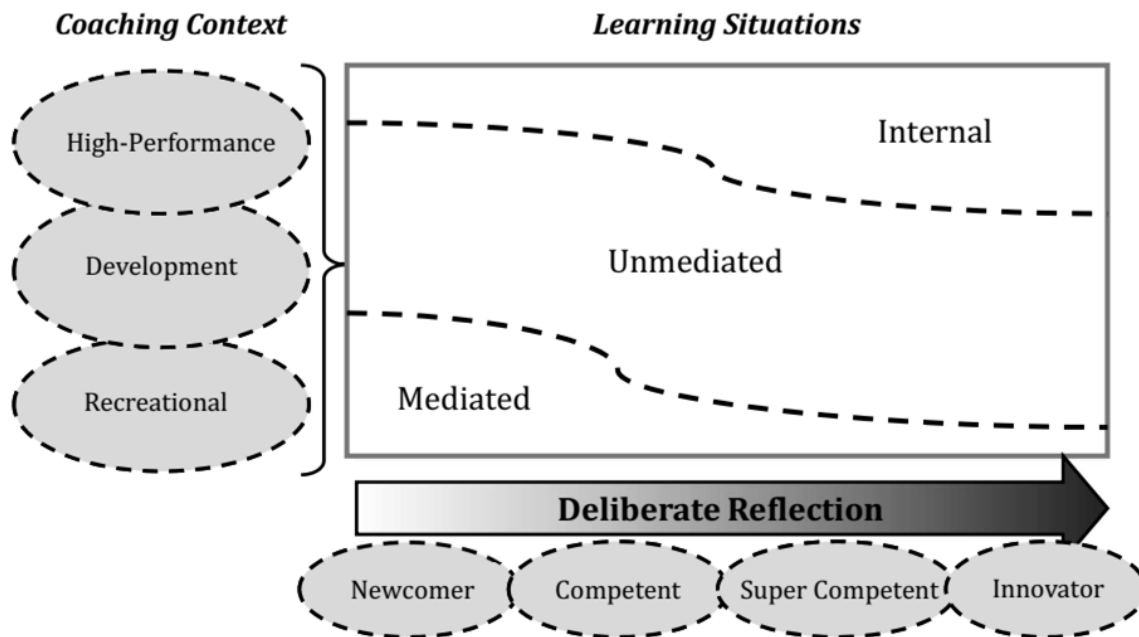
Coach Development Model

Dr. Wade Gilbert and Dr. Pierre Trudel consolidated this academic work into a pragmatic three-part series of publications regarding *The Role of Deliberate Practice in Becoming an Expert Coach* (Gilbert & Trudel, 2012; Gilbert & Trudel, 2013; Trudel & Gilbert, 2013). They introduced a model to better understand and guide coach development, that integrates three main components: *coaching contexts*, *stages of coach development*, and *types of learning situations*. With these components in mind, we have shared the conclusions of our furthered reflections and recent experiences in a recent article, in which we present an update of this coach development model (see Figure 1; Trudel, Gilbert, & Rodrigue, 2016).

Coaching Context

In the coach development model (Trudel & Gilbert, 2013; Trudel et al., 2016), coaching is divided into three main coaching contexts: (a) recreational, (b) development, and (c) high-performance (HP). *Recreational coaches* are often unpaid coaches of diverse experiences who supervise athletes who partake in sport for participation and leisure (Trudel & Gilbert, 2006;

Capstick, 2013). Coaches working in the *development* context often have some preceding athletic and work experience that are specific to their sport’s culture (Trudel & Gilbert, 2013). The *HP* sport context is defined as a level of competition in a given sport in which athletes compete in an exhaustive competitive structure regulated by national and international federations. In addition to technical and tactical preparation, coaches in this context often have to complete administrative and management duties while tending to the athletes’ personal development (Rynne & Mallett, 2012). HP coaches often are full-time coaches with extensive athletic and coaching experience who reach their first full-time head coach position after more than two decades of participation in sport (Erickson et al., 2007). They supervise athletes who meet the highest performance expectations in their sport and who partake in exhaustive training regimens (Trudel & Gilbert, 2006).



Source: Trudel, Gilbert, et Rodrigue (2016)

Figure 1. Coach Development Model

Coach Identity Evolution

In the updated coach development model (Trudel et al., 2016), we changed stages of coach development (i.e., *beginner*, *competent*, *proficient*, and *expert*) to a coach identity evolution continuum (*newcomer*, *competent*, *supercompetent*, and *innovator*). The terms changed for various reasons: (a) high-level professionals voiced discomfort with the term *beginner*, (b) researchers often label any HP sport coach as an *expert*, and (c) *SuperCompetent* refers more strongly to the coaches' ability to adapt their coaching style (Trudel et al., 2016). We also emphasised *identity* because it unites the individual and social environment more adequately in the learning process. The updated continuum thus introduces *newcomers* as coaches who are living their first exposure to a context. Specifically, they must learn the basic implications of practicing their profession in that context. Coaches are recognised as *competent* coaches when they have successfully completed their required coach education programme. Although sport coaching can hardly be compared to other professions (Duffy et al. 2011; Trudel et al., 2016), coaches are, more than ever, expected to be certified (Bolter, Petranek, & Dorsch, 2018; Murray, Schoenstedt, & Zwald, 2013). In an attempt to make sport coaching a profession, the curriculums are developed based on science and research, which means that we refer to professional competence and not practical competence (Collins, Burke, Martindale, & Cruickshank, 2015; Schön, 1987). Coaches at the *supercompetent* stage perform more consistently as they adapt their skills to their coaching context and develop a coaching practice unique to themselves (Trudel et al., 2016). Finally, *innovator* coaches push the boundaries of coaching practice in their context by creatively introducing new ideas or combining old ideas in new ways (Dyer, Gregersen, & Christensen, 2009; Uzzi, Mukherjee, Stringer, & Jones, 2013).

However, learning to become an *innovator* coach is not only the product of the coaches' solitary enterprise; rather, learning is also influenced by coaches' interactions with others.

Learning Situations

Depending on their position along these two components, coaches leverage a specific combination of learning situations, *mediated*, *unmediated*, and/or *internal*, to learn how to coach. By definition, *mediated learning situations* are situations where “the learning is directed by another person” (Werthner & Trudel, 2006, p. 201); *unmediated learning situations* happen when coaches initiate the learning situation and are “responsible for choosing what to learn” (p. 201); and *internal learning situations* occur when “there is a reconsideration of existing ideas in the coach's cognitive structure” (p. 201) without the exploration of new material. In other words, coaches may leverage any type, or combination, of these three types of learning situations based on their preferences and needs to improve their practice. This means that coaches leverage these situations in unique ways throughout their development to form their idiosyncratic learning pathway (Werthner & Trudel, 2009).

Deliberate Reflection

For coaches to learn how to coach and thus to evolve their identity, we argued that coaches had to consolidate their learning through deliberate reflection (Trudel et al., 2016). Deliberate reflection is the equivalent of the concept of deliberate practice, but for coaches. Practice becomes deliberate when (a) it presents enough of a challenge to a practitioner, (b) it is enriched with feedback, and (c) it is repeatable while allowing for errors and changes (Ericsson, 2003). For us, deliberate reflection is a *self-induced periodic confusion* (Hickson, 2011; Trudel & Gilbert, 2013) by coaches to generate feedback and to improve their coaching practice.

Trudel and Gilbert (2013) concluded the three-part series that discussed the role of deliberate practice for coach development by saying that “creating the right environment for nurturing coach development through deliberate practice” (p. 15) should be the goal of coach development administrators (CDA) and coaches who aspire to develop coaching expertise in others or in themselves. We have echoed this need by raising some concerns regarding the capacity of current sport environments to support coaches in creating this periodic disjuncture (Trudel et al., 2016), whether alone or guided.

We still observe tendencies for sport organisations to dictate what coaches should learn by orchestrating a series of activities integrated within a professional development plan that is created to address what CDAs think are the gaps in the coaches’ practice (Trudel et al., 2016). From our perspective, there are several issues with this approach: (a) it is not motivating for coaches, (b) it does not leverage individual strengths, and (c) it is not conducive to innovation. These observations led us to suggest that future coach development initiatives should employ strengths-based approaches, such as appreciative inquiry (Cooperrider, Whitney, & Stavros, 2005) or strengths-based reflective practice (Ghaye, 2011).

Considering that coaches (a) have unique biographies, (b) work in varied contexts, (c) have access to different learning opportunities, and (d) strive for distinctive career goals, the coach development model should be seen as an attempt “to organize a perspective on the world rather than generate statements that can be true or false” (Wenger-Trayner, 2013, p. 1). Below we reproduce two examples of learning journeys that show how the model can be used to guide the understanding of and discussion on coach development in different coaching contexts. These two fictional learning journeys, Tom (Trudel et al., 2016, p. 42) and Rachel (Culver, Trudel, Kraft, Werthner, & Duarte, in press), refer to a coach of able-bodied athletes and a coach of

athletes with disabilities respectively.

Tom's story. As a player, I was good enough to play a few games with the National team. Then I got injured and went back to school to complete a business degree. At the beginning of my second school year, I joined the university football team as an assistant coach. Then the head coach was fired and I took over. The first year was not easy and I quickly realised the difference between being an athlete and being a coach. As a newcomer in this coaching context, I had to learn so much, especially about the sub-culture of varsity sport. I contacted some former coaches and met occasionally with professors in the Kinesiology department. Looking for more coaching material, I also bought books and searched the Internet. The latter was often frustrating because of the amount of information and not knowing how to evaluate the quality of the information. One day I was informed I had to be certified by my National Sport Governing Body. Taking into consideration my athletic experience and my coaching context, I was “fast tracked” to Level Three. After 80 hours of courses spread over a few weekends, I successfully passed the written exam and the onsite evaluation. How useful was it? I felt that some coaching topics were useless, or I should say not pertinent to me, while other topics met my needs.

As years passed, I was feeling more and more competent and periodically attended a few workshops to accumulate the required professional development units to retain my certification. My coaching record showed an acceptable level of success, but I always felt limited in my personal development. I wanted to push my coaching to another level by doing things differently, but the environment did not provide me with adequate support. After seven years, I accepted an offer to coach the National team. Being a

newcomer again, I had to adapt to this new environment: different type of players, the required coaching style, the busy agenda (lot of travel), and the politics of high-performance sport. I was strongly advised to take Level Four of the certification program, which I did. I also attended many one-day courses on different hot topics (doping, selection procedures, etc.). By participating in these formal gatherings, I learned a lot but, more importantly, I met new people and enlarged my coaching network.

I deeply believe that in order to be among the best coaches in the world, I need to be able to explain why I am doing things the way I do and then ask this big question “Is there a better way of doing it?” It doesn’t mean I question all of my coaching, but I certainly should be more creative and innovative on some aspects. Innovation implies risk taking, and to do so I need the support of my sport federation and the other organisations involved with the National team. I need a positive learning environment.

Rachel’s story. I was born in family where the practice of sports was very strong. Every weekend we left on Friday night for the cottage. During the winter we did cross country skiing, downhill skiing, and skating on the lake; and during the summer it was swimming and sailing. My preference was swimming. I trained intensively when I was at the university for my degree in physical education. I wanted to teach at the secondary level. I won a few medals at national competitions but fell short of making the national team. In my last year at the undergraduate level, I answered an ad asking for an assistant coach for the swimming varsity team. I enjoyed this coaching environment and decided to stay for a couple of years. The main reasons were (a) the head coach was great and I was learning a lot with him, (a) we had a good group of 20 swimmers with a nice balance between men and women, (b) I had the opportunity to register for a master’s degree in sport

administration, and (c) a new sports complex was opening on campus with a fantastic swimming pool. Because the new building was more accessible for people with disabilities, a few athletes with disabilities knocked at the door to train with us. At this moment, the head coach asked me if I would accept to be in charge of the training of a group of six athletes with disabilities. I said “why not?”. In my degree in physical education I had taken a few courses specific to ‘adapted physical activity population’ and I had a life experience where I spent time with a disabled person. At the cottage we had a very good friend with whom I practiced all sports; Michelle had a disability. She had one short arm. I have always been impressed by her determination. She always found a way to adapt her environment to be able to follow us. In fact, she was often better than we were. Thus, I thought that it would not be a big deal to coach only six athletes. I was so wrong. Each of them had their own physiological disability, which meant being at a different place in the classification system. Instead of one training plan to prepare and then slightly adapt it to the athletes’ needs like I was doing for the able-bodied athletes, it was six completely different training plans. I can say that even if I was a newcomer in coaching athletes with disabilities, I found myself coaching a group of athletes who were evolving in either the recreational, developmental, or high-performance context. To accompany my athletes to competitions I had to be certified by the sport federation even if I had a bachelor in physical education. Unfortunately, coach education programs specific to disability sports are rare and it was suggested to get my certification through the regular able-bodied coach education program in swimming. In reality, what helped me the most was my network. I had kept contact with two of my professors who were experts in sport physiology and sport biomechanics, a friend put me in touch with her

father who was a wheelchair athlete trainer and he became my mentor, at competitions I found it very easy to share disability specific knowledge with other coaches, and I frequently searched on the Web for new information. I quickly noticed that my best sources of information were the athletes and their parents. Thus, I needed to establish a good communication system with them and also with some health care specialists, especially doctors and physiotherapists. Progressively, I fine tuned my coaching approach and after 12 years, I feel a lot more competent; I could say I am super competent. This is probably the reason why now I have a group of 15 athletes and one assistant coach that I am mentoring. With the advances in sport training and the new technology, I think we should reflect more about the limits of our program and how to improve things. But to do this effectively, I need to book time, but when? I already work more than 50 hours a week. I would need someone to help me to innovate and to keep learning.

When we presented the updated model, the intent was to share our reflections about the support provided to coaches along their lifelong learning journey (Trudel et al., 2016). The connection between the two, the coach development model and the theory of lifelong learning, has not yet been made explicit. I therefore linked components of the theoretical framework with the components of the model, which I present in Table 2, based on explanations presented in publications that discussed these components (Trudel, Gilbert, & Werthner, 2010; Trudel & Gilbert, 2013; Trudel et al., 2016; Werthner & Trudel, 2006, 2009).

Considering that this doctoral dissertation focuses on one coaching context, HP coaching, I considered it essential to provide an overview of the literature on HP coach development by conducting a State-of-the-Art review.

Table 2

Elements of the Theoretical Framework Matched with the Coach Development Model

Theory of Lifelong Learning (Jarvis, 2006; 2007; 2008)	Coach Development Model (Trudel, Gilbert, & Rodrigue, 2016)
Biography : <i>The person's current understanding of the world.</i>	Coach identity evolution
Life-world : <i>The multiple dimensions of reality that a person experiences.</i>	Coaching context
Harmony : <i>A situation that is consistent with the person's current understanding of the world.</i>	Learning situations
Disjuncture : <i>A situation that is inconsistent with the person's current understanding of the world.</i>	
Space : <i>Sensory experience and interactive experiences that happen in the physical and social space respectively.</i>	Learning situations
Culture : <i>Knowledge, skills, attitudes, beliefs, values and emotions that we, as human beings, have added to our biological base.</i>	Interactions between components
Technology : <i>Technology simplifies access to information, enables real-time collaborations, and proliferates learning opportunities.</i>	Learning situations
Time : <i>The timing at which a person's lives an episodic experience.</i>	Learning situations
Thinking, Acting, & Feeling : <i>Ways of experiencing the world that could lead to changes (i.e., learning).</i>	Learning situations

State-of-the-Art Review

Grant and Booth (2009) argued that the work of scholars can be informed by 14 types of reviews of literature such as systematic and State-of-the-Art reviews. Researchers often prefer systematic reviews because this meticulous methodology seems to produce reliable reviews that synthesise the findings of many studies (Langan, Blake, & Lonsdale, 2013). In contrast, a State-of-the-Art review produces an idiosyncratic view of a field, but it helps researchers to suggest new perspectives and identify current research gaps and needs (Grant & Booth, 2009). A State-of-the-Art review entails addressing “more current matters in contrast to the combined retrospective and current approaches of the literature review” (p. 101). Considering the benefits of this form of review and the objective of Chapter 3, I selected the State-of-the-Art review methodology to examine the literature. Specifically, the review’s scope was limited to the last 15 years since this time range reflects both the rationale of a State-of-the-Art review (Grant & Booth, 2009) and the evolution of the production of coach development research (Gilbert & Rangeon, 2011).

With the support of a librarian, I conducted a State-of-the-Art review that targeted publications specific to ‘HP sport coach development’ or ‘HP sport coach learning’ in four databases: SCOPUS, ERIC, SPORTDiscus, and PsycInfo. The first step of this State-of-the-Art review was to search key terms related to the development or learning of coaches within an HP context. Once this search was performed, the results were restricted to (a) original articles with full text available, (b) English language, (c) peer-reviewed journals, and (d) published from 2003 to 2018. A total of 123 articles were found. I then fetched full-text documents to discard inappropriate documents (e.g., inaccessible, thesis, not empirical studies, multiples coaching contexts) which brought the database down to 47 articles. During the analysis, I noticed that

three articles were miscategorised, which were subsequently removed from the database. I also realised that three essential articles of the HP coach development literature were missing (i.e., Abraham, Collins, & Martindale, 2006; Bertram, Culver, & Gilbert, 2017; Schempp, Webster, McCullick, Busch, & Sannen Mason, 2007). These articles had to be added for two reasons: (a) their absence could produce misrepresentation of the state of the field by, for example, disregarding an entire concept (e.g., communities of Practice with Bertram et al., 2017), and (b) their contributions had been recognised by other scholars in the field of coaching research (e.g., 385 citations for Abraham et al., 2006). These additions brought the final count from 44 to 47 articles (see Table 3). I then felt confident that the documents extracted would provide an overview of the empirical evidence relevant to the development of HP coaches according to the categorisation proposed in the coach development model (Trudel et al., 2016).

Form of analysis

A deductive analysis was conducted on the findings of each study by noting every single learning situation that came out of the results (i.e., learning situations explicitly reported by the coaches). From there, I listed all of the learning situations that were reported according to the type of learning situation: *mediated*, *unmediated*, or *internal learning situations*. Then, I reviewed the findings of every paper that discussed each specific learning situation. For instance, I started the analytical process by reviewing the reports of each paper that discussed seminars: a *mediated* learning situation. I then formulated a narrative summary of the findings reported for this specific learning situation. This process was then repeated for each of the other learning activities reported. As I delved deeper into the analysis, I noticed common perspectives adopted by the authors of these publications and then discussed those perspectives with my thesis supervisor. Overall, there were three types of studies that discussed the development of HP

coaches: (a) articles that outline the coaches' preferred or actual learning situations, (b) articles that examine the developmental paths of HP coaches, and (c) articles that present findings from studies that examined HP coach education programmes. In the next section, I discuss the findings of this review according to each learning situation by presenting their respective narrative summary.

Table 3

Empirical Studies on Learning Activities of HP Coaches

Authors (publication)	Type of Study	Mediated	Unmediated Solo	Unmediated Accompanied	Internal Solo	Internal Accompanied	Conclusions
Abraham et al. (2006) JSS, 24(6)	Situations	Seminars	Written	Peers IST	Coaching		Coaches acquired knowledge using “serendipitous methods”, by self-reflecting on their practice, and learning from other coaches.
Bertram et al. (2017) IJSSC, 12(3)	Situations			CoP			From participating in a Community of Practice, NCAA coaches learned and implemented changes that impacted their team’s performances.
Callary et al. (2014) ISCJ, 1(3)	Program	Seminars Certification		Peers CoP Mentors	Coaching Portfolio Journaling Conversation		Programs that link theory and practice effectively. National programs used a variety of learning situations, but few internal.
Callary et al. (2012) QRSEH, 4(3)	Situations	Certification		Performers Peers Networks	Conversation		Coaches learn when they change their coaching practices after connecting an experience with their biography.
Callary et al. (2013) IJLE, 32(2)	Situations		Athlete	Performers IST			Coaches integrate their values and learn to articulate them through their various coaching experiences.
Callow et al. (2010) SP, 18	Situations	Seminars		IST			Workshops are not the most effective. An approach based on learner-needs with opportunities to apply seems more promising.
Carter & Bloom (2009) JSB, 32(4)	Situations	Academia	Athlete	Networks Peers Observation	Coaching		Coaches that achieve more as coaches than as athletes learn from a variety of learning situations.
Christensen (2014)	Situations	Excursions Mentors		Peers IST Networks	Conversation		The MED-UM-INT typology is useful, but clarification is needed. A strategy that considers the coaches’ biography would optimise learning.

Chung et al. (2010) IJSEP, 8	Pathway			Networks Peers			Chinese elite coaches develop through a platform of developmental opportunities.
Collins et al. (2012) IJSP, 43(3)	Pathway	Seminars		Peers	Conversation		Coach education should offer two pathways: (a) integrating plenty of learning situations, and (b) fostering best practices sharing opportunities.
Dixon et al. (2012) RP, 13(3)	Situations	Certification Mentors		Peers Performers	Conversation	Guided	Reflexive conversations can help develop the performance potential of people involved in the conversation.
Erickson et al. (2007) SP, 21	Pathway	Certification Mentors	Athlete				The pathway is divided in (1) early participation, (2) competitive participation, (3) introduction to coaching, (4) part-time coaching, and (5) HP head coach.
Ferrar et al. (2018) ISCJ, 15(1)	Program	Seminars					A series of five seminars over 18 months can enhance coach effectiveness.
Galvan et al. (2012) APJHSPE, 3(2)	Program	Certification		Peers	Conversation		Positioning coaches as educators help them reflect on their practice and update their philosophy.
Greenwood et al. (2014) JSS, 32(4)	Situations				Coaching		Experiential knowledge helped coaches build reference points that improved their ability to coach locomotor performances.
He et al. (2018) IJSSC, online.	Situations	Mentors Seminars	Athlete				Chinese gymnastics coaches found that mentoring and experiential learning were important sources of knowledge acquisition.
Hussain et al. (2012) IJSSC, 7(2)	Program	Certification Mentors			Portfolio		Coach education programs should integrate the coaching context and the biography of the coaches.
Irwin et al. (2004) RP, 5(3)	Situations	Mentors Seminars	Athlete Observation		Coaching		Elite men's artistic gymnastic coaches learn via a mix of situations, such as clinics, mentorships, and reflective practice.

Jones et al. (2003) SEC, 8(2)	Pathway	Mentors Certification	Athlete	Peers	Coaching	Professional knowledge is generated via socialisation, while mentors and experience contributed to his overall understanding of coaching.	
Judge et al. (2018) IJSSC, 3(4)	Situations			IST	Coaching	Coaches should work with biomechanists to improve athletes' performances.	
Knowles et al. (2005) Ergonomics, 48(1)	Situations				Conversation	Organisations and education programs have to integrate reflective practice more.	
Koh et al. (2015) ISCJ, 2	Situations				Journaling	Guided	Assisting coaches with a facilitator when using reflective practice seems beneficial.
Koh et al. (2011) IJSEP, 9(4)	Pathway	Seminars Mentors Certification	Athlete		Conversation	Singapore HP basketball coaches have career pathways that are similar to Erickson et al. (2007).	
Lara-Bercial & Mallett (2016) ISCJ, 3(3)	Pathway	Academia Certification Seminars Mentors	Observation Visual Written Athlete	Peers Performers	Coaching Conversation Portfolio Other jobs	Serial winning coaches are individual, have unique developmental pathways, and use a mix of development opportunities.	
Longshore & Sachs (2015) JCSP, 9	Situations	Certification				A workshop complemented by a post-workshop assignment positively impacts their wellbeing.	
Mallett et al. (2016a) PESP, 21(1)	Situations	Mentors Certification Academia	Athlete Observation Written Visual	IST Peers Networks	Coaching Conversation Other jobs	Coaches value learning experiences differently from their first two years in contrast to their most recent two years.	
Mallett et al. (2016b) PESP, 21(1)	Situations			Networks		Australian Football League coaches studied fields outside of their sport and demonstrated agency in building their learning culture.	
Mesquita et al. (2014) SP, 28	Situations			Peers Networks		Expert coaches used a variety of learning situations that included a balance between practical experience and attending a program.	
Nash & Sproule	Situations			Networks	Conversation	The development of coaches is hindered by organisational	

(2009) IJSSC, 4(1)							structures. Coaches learned informally from their network.
Ollis & Sproule (2007)	Program	Certification					A constructivist-approach to coach education is effective if coaches can link their new learnings with their previous experiences.
Purdy & Potrac (2016) SES, 21(5)	Pathway			Peers			The career progression and identity negotiation of an HP coach is non-linear and independent.
Reade et al. (2008a) IJSSC, 3(3)	Situations		Written Visual	Peers IST			Coaches autonomously research new information, but knowledge transfer remains difficult.
Reade et al. (2008b) IJSSC, 3(3)	Situations	Seminars	Written	IST Peers			Coaches believe in the effectiveness of interactions with sport scientists. Scientific information was difficult to translate for these coaches.
Reade & Rogers (2009) JCE, 2(1)	Situations			IST			This study of 38 university coaches found that coaches effectively acquired knowledge through collaboration with sport scientists.
Roberts & Faull (2013) RP, 14(5)	Situations				Guided		This study found that reflective practice combined with evidence-based practice was effective in helping a coach prepare for Olympic Games.
Rossi et al. (2016) PESP, 21(1)	Situations	Academia		Peers	Journaling Conversation		Learning is influenced by the learning culture of the organisation, which is influenced by athletes, coaches, and administrators.
Rynne (2014) SES, 19(3)	Pathway		Athlete	Networks			The social aspect of coach development should be considered more.
Rynne & Mallett (2012) PESP, 17(5)	Situations	Academia Certification Excursions	Written Athlete	Peers IST	Coaching		Coaches relied on several sources when entering HP coaching as they were unprepared for this position.

Rynne & Mallett (2014) RP, 15(1)	Situations	Academia	Athlete Observation	Peers IST	Coaching Conversation	Unmediated learning situations are dominant, but do not guarantee professional sustainability.
Sáiz et al. (2009)	Pathway	Mentors Certification	Athlete	Peers	Conversation Coaching	Expertise is developed through a mix of experience, dedication, study, reflection, and interactions.
Sawiuk et al. (2017) PESP, 22(4)	Situations	Mentors				The integration of a system of multiple mentors could help address political and social problems that accompany mentorship.
Schempp et al. (2007) SES, 12(2)	Situations		Written Video Observation	Peers IST		Golf coaches reported using many situations, such as interactions with various experts, or reading material inside or outside of their domain.
Tracy et al. (2018) IJSSC, 13(1)	Pathway	Mentors	Athlete	Peers		Football head coaches found that mentorship, leadership experiences, and athletic experiences played a key role in their development.
Werthner & Trudel (2006) SP, 20	Pathway		Written	Performers Peers	Conversation	The authors presented three types of learning situations that composed the learning process of elite coaches: mediated, unmediated, and internal.
Werthner & Trudel (2009) IJSSC, 4(3)	Situations	Academia Seminars Mentors	Athlete		Conversation	This study of the learning pathways of 15 Canadian Olympic coaches found that their learning was context specific and idiosyncratic.
Wiman et al. (2010) IJCS, 4(2)	Situations	Mentors Seminars Certification	Athlete Observation	Performers Peers	Coaching Conversation	Elite coaches used a mix of sources of knowledge acquisition, iterative dedication, and adaptation according to feedback.
Winfield et al. (2013) IJEBCM, 11(1)	Situations	Mentors			Cards	Guided Coaches felt that mentoring improved their ability to use reflective cards and engage in reflective practice effectively.

Mediated Learning Situations

HP coach development researchers have identified many mediated learning situations: *coach education programmes* (e.g., Callary, Culver, Werthner, & Bales, 2014; Ollis & Sproule, 2007), *seminars* (e.g., Callow, Roberts, Bringer, & Langan, 2010; Reade, Rodgers, & Hall, 2008a), *academic education* (Carter & Bloom, 2009; Rossi, Rynne, & Rabjohns, 2016), and *imposed mentors* (e.g., Purdy & Potrac, 2016; He et al., 2018). Mediated learning situations are sometimes forced upon HP coaches by their respective coach development administrators (Koh, Mallett, & Wang, 2011; Rynne & Mallett, 2012). Mediated learning situations nevertheless provide coaches with a knowledge base to work from.

HP *coach education programmes* are a substantial chunk of mediated learning situations according to the literature. The results of some studies indicated:

- In England, only 36% of HP Gymnastics coaches considered coaching courses important for the acquisition of coaching knowledge (Irwin et al., 2004);
- In Australia, HP coaches completed hundreds of hours of coach education to acquire their official coaching accreditation to coach at their respective level (Rynne & Mallett, 2012);
- In the USA, a study on the United States Olympic Committee's leadership coach education programme showed that a series of five seminars over 18 months could enhance coach effectiveness (Ferrar, Hosea, Henson, Dubina, Krueger, Staff, & Gilbert, 2018);
- Callary and colleagues (2014) examined the characteristics of HP coach education programmes from seven national HP coaching certification (Canada, France, Germany, Netherlands, Norway, Switzerland, and New Zealand) and found that:

- (a) certification programmes in Canada, Norway, and Netherlands were akin to a curriculum that exposes coaches to numerous themes over many seminars to collect credits;
- (b) programmes in France, Germany, Switzerland, and New Zealand forced coaches to attend camps that last a few days periodically;
- (c) Norway and Switzerland were the only countries that make it mandatory for coaches to engage in reflective learning;
- (d) Netherlands had the only programme that did not require coaches to complete a final exam or deliver a final presentation; and
- (e) These programmes all used a variety of learning situations supplemented by individual sessions with a mentor (Callary et al., 2014). Although these sessions provided feedback to coaches; no details were provided as to how these coaching sessions were conducted.

Despite the international programmes' similarities and differences, it remains that coach education programmes' effectiveness relied on the engagement of participating coaches.

Researchers suggested using a constructivist strategy in collaboration with HP directors for developing programmes that are more enticing to coaches, such programmes are rare (Hussain, Trudel, Patrick, & Rossi, 2012). Regardless, some authors have underlined its value for coach development (Galvan, Fyall, & Culpan, 2012; Hussain et al., 2012; Ollis & Sproule, 2007).

While this type of coach education programme is promising, coach development administrators will face challenges, such as (a) a lack of direction, (b) resistance to the shift in paradigm, and (c) the time needed to familiarise oneself with the programme's rationale, in implementing

programmes that embrace other paradigms in organisations that operate in the positivist paradigm of teaching best practices (Paquette & Trudel, 2018).

Seminars can be useful in helping HP coaches access sport science knowledge (Reade et al., 2008a). For instance, Chinese HP gymnastic coaches appreciate this learning activity (He et al., 2018) although it is not their preferred source of knowledge acquisition. Serial winning coaches, coaches who trained athletes that won a medal or more during two or more world championships and/or Olympic Games, indicated rarely preferring coaching clinics over other types of learning situations (Lara-Bercial & Mallett, 2016). Nevertheless, HP coaches frequently attend coaching seminars and clinics to meet the demands of HP organisations (Lara-Bercial & Mallett, 2016; Koh et al., 2011). National HP coach education programmes indeed use seminars in their curriculum (Callary et al., 2014).

Studies have also underlined the contribution of *academic education* to the developmental pathway of coaches (Carter & Bloom, 2009; Lara-Bercial & Mallett, 2016; Mallett, Rynne, & Billett, 2016a; Rynne & Mallett, 2012; Rynne & Mallett, 2014; Werthner & Trudel, 2009). HP coaches often have at least an undergraduate degree (Callary et al., 2014; Erickson et al., 2007; Koh et al., 2011). For example, Carter and Bloom (2009) found that university coaches, who completed coaching relevant majors (i.e., physical education, kinesiology), considered that it contributed significantly to their overall coaching knowledge. Studies from around the world have also reported that academic education helped coaches succeed by supporting the development of general skills such as management, planning, and critical thinking, although it did not contribute to their professional knowledge (He et al., 2018; Lara-Bercial & Mallett, 2016).

On their way to the HP level, coaches value mentoring as a learning opportunity because it often provides them with useful information throughout their development (Erickson et al., 2007; Mallett et al., 2016a). Normally, *formal mentoring* relationships constitute an important learning situation in the HP coach development literature. In an attempt to complement coach education programmes, mentors are often imposed upon coaches (Callary et al., 2014). These programmes mostly use one-to-one mentoring, whether it was provided by the sport federation (France, New Zealand), or by the Olympic federation (Norway). Some formal mentoring programmes use mentors to assess the coaches' performance (Canada, Germany), whereas other programs used mentors simply to provide feedback (Netherlands). In contrast, formal mentoring was reported as almost absent for HP basketball coaches in Singapore (Koh et al., 2011). Although the importance and use of mentoring varies between countries, there are some important implications and drawbacks to formal mentoring programmes. Sawiuk, Taylor, and Groom (2017) highlighted four important considerations: (a) formalised mentoring requires specialist mentors be trained within that competence; (b) formalised mentoring is often driven by organisational and institutional agendas; (c) formalised mentoring does not answer the needs of the coaches' development and practice; and (d) formalised mentoring can be a form of control of the coaches. That is to say that imposed mentoring is frequent across the world of HP sport, is valued to a certain extent by HP coaches, and mostly prioritises institutional needs and goals. Mentoring effectiveness and appreciation could perhaps be enhanced by combining it with other strategies. For instance, Winfield, Williams, and Dixon (2013) used reflective practice to complement the mentoring process of HP equestrian coaches in the UK.

Advantages and limitations. The findings of these studies raise some questions regarding the role of *mediated learning situations* in the developmental pathway of HP coaches.

For instance, eight elite-expert Spanish basketball coaches underlined the positive contribution of sport-specific and general coaching courses to their development (Sáiz, Calvo, & Godoy, 2009). Academic or sport courses have been shown to help coaches increase their general knowledge (Dixon, Lee, & Ghaye, 2012). However, Canadian HP coaches spent little time participating in programmes, certifications, or courses (Erickson et al., 2007), while HP basketball coaches in Singapore indeed invested significant time in official coach education programmes (Koh et al., 2011). Regardless of the structure in each country, there is a consensus that all HP coaches participate in coach education programmes at some point in their career (Erickson et al., 2007; Koh et al., 2011; Lara-Bercial & Mallett, 2016).

Mediated learning situations help HP coaches gain familiarity with important aspects of their work. For instance, HP coaches' participation in mediated learning situations improves their understanding of the structure of their sport and the certification process in which they are involved (Callary et al., 2014; Jones, Armour, & Potrac, 2003; Werthner & Trudel, 2009). It helps coaches become familiar with the terminology used by their federations, which then helps them improve the effectiveness of their technical preparation (Dixon et al., 2012; Galvan et al., 2012; Irwin et al., 2004). Mediated learning situations can link theory and practice when they are combined with ongoing coaching and a portfolio of learning activities (Callary et al., 2014).

However, relying exclusively on mediated learning situations for HP coach development can create problems because it means that the coaches' evolution depends on coach developers and organisations putting courses together (Irwin et al., 2004). Few coaches prefer mediated learning situations over other learning opportunities even though they recognise that they can be informative (He et al., 2018; Lara-Bercial & Mallett, 2016; Rynne & Mallett, 2012). Recurrent concerns towards these situations are the coaches' lack of time for traditional educational

activities (Sáiz et al., 2009) and issues in applying the knowledge in their training sessions (Galvan et al., 2012; He et al., 2018). In summary, mediated learning situations provide foundational knowledge to leverage other learning opportunities. As Lara-Bercial and Mallett (2016) said: “[Serial Winning Coaches] used formal education as a springboard for their learning” (p. 26).

Unmediated Learning Situations

HP coach development publications highlight a plethora of unmediated learning situations: *interactions with peers* (e.g., Carter & Bloom, 2009), *communities of practice* (e.g., Bertram et al., 2017), *informal mentors* (e.g., Irwin et al., 2004), *athletic experience* (e.g., Jones et al., 2003), *athlete feedback* (e.g., Werthner & Trudel, 2006), *interactions with integrated support team* (e.g., Reade et al., 2008a), *social networks* (e.g., Nash & Sproule, 2009), *observation of peers* (e.g., Irwin et al., 2004), *visual resources* (e.g., Reade et al., 2008a), *written resources* (Reade, Rodgers, & Spriggs, 2008b), and *excursions* (e.g., Rynne & Mallett, 2012).

The analysis revealed two main categories of unmediated learning situations. First, there were *solo unmediated learning situations* (athletic experience, audio resources, visual resources, written resources) where the learner decides the learning content and can access it without the help of another person. I chose the word ‘solo’ for qualifying this category since its definition is “alone; without other people” (Solo, n.d.) and it is the shortest word referring to this idea (i.e., solo vs solitary, alone). Second, there were *accompanied unmediated learning situations* (e.g., communities of practice, interactions with peers, athlete feedback) where the content of learning is decided by the learner, but the situation requires the presence of another person. I have selected the word ‘accompanied’ since it is defined as “to go with someone or to be provided or

exist at the same time as something” (Accompanied, n.d.) and other words did not accurately represent the dynamic of these situations (i.e., accompanied vs guided, escorted, or led).

Solo Unmediated Learning Situations

Solo unmediated learning situations are abundant, easily accessible, but often lack validation. Some examples include: athletic experience (i.e., career as an athlete), visual resources (e.g., video clips, documentaries), written resources (e.g., books, blog articles), and audio resources (e.g., podcasts, audiobooks). In their first years of coaching, HP coaches tended to use their *experience as athletes* to define their coaching practice (Erickson et al., 2007). In essence, they recall the coaching style and values of their best coaches (Carter & Bloom, 2009; Callary et al., 2013). As they learn to be a competitive athlete, prospective HP coaches learn professional knowledge and develop their personal understanding of effective technical and tactical performance (Irwin et al., 2004; Jones et al., 2003). Then, the contribution of athletic experience decreases as coaches progress in their coaching career (Mallett et al., 2016a).

Other forms of solo unmediated learning situations (written, audio, and visual) contribute to the coaches’ knowledge base, but some are more frequently used by coaches and studied by researchers. *Written resources*, such as scientific publications, have been labelled as insightful (Mallett et al., 2016a; Reade et al., 2008a; Rynne & Mallett, 2012; Werthner & Trudel, 2006), although coaches find the information difficult to understand at times (Reade et al., 2008b). In contrast, there is a paucity of research that examines the contribution of visual and audio resources. Papers included in this review identified *visual resources* as a source of knowledge, but none have examined their contribution specifically. Overall, coaches explore various forms of resources, which they find insightful, but transferring the acquired knowledge to their coaching practice is challenging because the knowledge lacks specificity (Reade et al., 2008b).

The production of *audio resources*, such as podcasts, has increased immensely in the last decade, but has not yet been identified and studied. For instance, *podcasts*, such as the Dr. Bubbs Performance Podcast (DrBubbs.com, 2019), can represent a valuable source of knowledge acquisition; they grant access to interviews performed with sport professionals and/or researchers for free.

Advantages and limitations. *Solo unmediated learning situations*, such as visual, written, or audio resources, can be accessed online at a time that is convenient for coaches (Pope, Stewart, Law, Hall, Gregg, & Robertson, 2015). Due to content now being abundantly available to sport coaches (Dixon, Lee, & Ghaye, 2013) and technology rapidly expanding (Jarvis, 2007), access to online resources is much easier than before (Reade et al., 2008a). For instance, coaches can watch videos of drills for teaching a specific technical skill free of charge, from their home, and at any time of the day. This accessibility is beneficial considering that coaches find online resources, such as video, engaging (Koh, Lee, & Lim, 2018).

Furthermore, creating and sharing content has become a core tenant of the marketing strategy of international businesses and educational institutions (Baltes, 2015), including leading global sport organisations (e.g., LEADERS, 2019). This tendency builds a driving force that maintains, if not accelerates, the production of resources for coaches. Organisations share professional resources meant to help prospective clients, which adds to the pool of resources coaches can use to learn because they act as a supplement to scientific publications and coach education documents.

However, some coaches rarely use online resources to acquire knowledge (He et al., 2018) and others have a hard time integrating the information gleaned from such resources to their coaching practice (Reade et al., 2008b). Rare are the resources that are tailored to the

coaches' specific coaching context (Reade et al., 2008b). There are few studies that explore the use of these resources by HP coaches, most have only identified these as sources of knowledge acquisition (He et al., 2018; Lara-Bercial & Mallett, 2016; Mallett et al., 2016a).

Accompanied Unmediated Learning Situations

Accompanied unmediated learning situations, such as interactions with peers, observation of peers, interactions with support staff, social networks, communities of practice, mentors, or athlete feedback, are discussed on numerous occasions in the literature. Many of these publications indicated that coaches learn from interactions with *peers* (Carter & Bloom, 2009; Chung, Si, Jiang, & Zhang, 2010; Sáiz et al., 2009). This learning situation was identified as a source of knowledge that coaches preferred in 21 of the 47 publications. Interactions with peers is often unplanned and happens around coaching clinics, seminars, or coach education programmes (Callary et al., 2014). Coaches highlighted that interactions with other coaches, while away from their own coaching context, benefited their coaching practice (Christensen, 2014). However, the value of these interactions depends on the attitude of coaches. Coaches either (a) aspired to help everyone and to learn from everyone, or (b) refrained from sharing and looked to extract everything they could from interactions to improve their own practice (Collins, Abraham, & Collins, 2012).

HP coaches also appreciate *athlete feedback* as a learning situation to improve their coaching practice although few access it regularly (Lara-Bercial & Mallett, 2016). Interactions with athletes help coaches integrate and articulate their values (Callary et al., 2013), while informing their coaching practice (Dixon et al., 2012). Studies of HP Canadian coaches showed that coaches indeed used athlete feedback (Werthner & Trudel, 2006). It still remains a situation that is vastly under studied in the HP context.

Observation of peers similarly help coaches learn other coaching practices (Carter & Bloom, 2009; Irwin et al., 2004). Lara-Bercial and Mallett (2016) showed that serial winning coaches rarely accessed observations of peers, but that they would like to use this strategy more often. Coaches did not consider observations needing any form of interactions with their peers for the situation to be valuable, coaches simply wanted to see things done differently (Wiman, Salmoni, & Hall, 2010).

Furthermore, authors reported interactions with *support staff* as a valuable source of knowledge acquisition (Callary et al., 2013; Mallett et al., 2016; Rynne & Mallett, 2012). A series of studies demonstrated that coaches effectively acquired knowledge through collaboration with sport scientists (Reade & Rodgers, 2009; Reade et al., 2008a; 2008b). Rynne and Mallett (2012) argued that paraprofessionals (e.g., mental performance coach, strength and conditioning coach) were important sources of learning since it is impossible for coaches to possess all necessary disciplinary knowledge that impacts their athletes' performance. For example, Judge and colleagues (2018) reported that collaboration with biomechanists helped to improve their athletes' performance.

Regardless of the sport, studies of HP coaches have also shown that *informal mentors* are influential sources of knowledge acquisition and skill development (Irwin et al., 2004; Jones et al., 2003; Sáiz et al., 2009). Informal mentors are models that influence the coaches' perception of effective coaching even though coaches recognise their own imperfections over time (Christensen, 2014; Irwin et al., 2004). Mentors have a big enough impact to lead coaches to change their practice beyond the sport-specific aspects (Irwin et al., 2004; Jones et al., 2003; Sáiz et al., 2009). Mentors were essential facilitators of growth in the development of HP coaches and their career progression (Dixon et al., 2012; Wiman et al., 2010), who often emerged organically

from their networks (Christensen, 2014; He et al., 2018; Lara-Bercial & Mallett, 2016). This organic evolution fosters interactions with informal mentors that, in the case of HP Spanish basketball coaches, were unstructured, informal, and irregular (Sáiz et al., 2009). Informal mentors were especially important for serial winning coaches during their challenging years (Lara-Bercial & Mallett, 2016). Chinese gymnastics coaches also indicated that they valued mentors who shared their coaching experience with them (He et al., 2018). Because *informal mentoring* is not structured and some coaches might have difficulties finding competent mentors, many authors suggest creating formal mentoring systems (He et al., 2018; Koh et al., 2011), as previously discussed in the section on *formal mentoring* programmes.

Social learning situations play a role in coach development (Culver & Trudel, 2006; 2008). Bertram and colleagues (2017) showed that *communities of practice* create value for its participating university coaches. This study is the only one included in this review where researchers have examined the implementation of communities of practice within an HP context. However, many researchers have highlighted the impact of social networks on coach learning (Christensen, 2014; Chung et al., 2010; Mesquita, Ribeiro, Santos, & Morgan, 2014; Occhino, Mallett, & Rynne, 2013).

Advantages and limitations. *Accompanied unmediated learning situations* are abundant and represent a contextualised learning opportunity. These situations help coaches gain access to exclusive professional knowledge in their sport (Jones et al., 2003). When coaches interact together, knowledge is communicated with an already established understanding of the context. Further, interactions with specialists provide access to a realm of information that is otherwise accessible at great cost (i.e., time-consuming, financial investment) since professionals possess specialised knowledge (Judge et al., 2018). Relationships between individuals have a significant

impact on the learning culture of a sport organisation, thereby affecting the development and learning of each member (Rossi et al., 2016).

Nevertheless, these situations can lead to the replication of ineffective coaching practices in certain contexts due to the coaches' lack of critical thinking and the incorrect evaluation of these strategies as best practices (Rynne & Mallett, 2014). This discourse prevents coaches from questioning the effectiveness of those practices and adapting them to their context. In brief, the socialisation process should not be overlooked as it does contribute to the overall understanding of coaching (Jones et al., 2003), but it also normalises coaching practices based on the blessing of peers and specialists. Rynne and Mallett (2014) concluded that unmediated learning situations sometimes provide bad examples, but they encourage coaches to further their reflections.

Internal Learning Situations

To help coaches change their cognitive structure without adding new information, studies have identified a few internal learning situations: reflective writing (journaling), guided reflection, producing material (portfolio), and reflective cards. Many authors have argued for the essential role of reflection in coach learning (e.g., Knowles, Borrie, & Telfer, 2005; Trudel & Gilbert, 2013), but few studies on HP coach learning go beyond identifying these situations as sources of coaching knowledge. Similar to *unmediated learning situations*, there were two categories of *internal learning situations* in this review: *solo internal learning situations* (e.g., reflective writing) and *accompanied internal learning situations* (e.g., guided reflection).

The analysis of the literature shows that HP coach education programmes integrated few internal learning situations into their curriculums (Callary et al., 2014). An exception seems to be the coach education programme in New Zealand where coaches were encouraged to use reflective practice to update their coaching philosophy (Galvan et al., 2012). Mallett and

colleagues (2016a) showed that coaches ranked reflection as having a minor role in the first two years on-the-job for HP coaches. However, reflection elevated to the sixth most influential developmental activity for coaches in the middle of their career and to third most influential later in their career. This upgrading of reflection over time as a perceived developmental activity suggests that internal learning situation become more important for senior coaches than junior coaches in the HP context.

Solo Internal Learning Situations

Many strategies can be used to experience an internal learning situation. *Reflective writing* was examined the most (Rossi et al., 2016). Scholars have discussed *reflexive conversation* as a process in which coaches have an internal dialogue about their coaching practice, whether it concerns their philosophy (Christensen, 2014) or their preparation (Dixon et al., 2012). Two publications have also identified *producing portfolios* as a valuable developmental activity to challenge coaches' cognitive structure (Hussain et al., 2012; Lara-Bercial & Mallett, 2016). Other authors have underlined that ongoing coaching contributes to a reorganisation of the cognitive structure as it sets the foundation for coaches to take moments, or use tools, to reflect (Carter & Bloom, 2009; Irwin et al., 2004; Jones et al., 2003).

Advantages and limitations. Coaches can use solo internal learning situations at will, whether they engage in reflective writing (Koh, Mallett, Camiré, & Wang, 2015) or reflection about their own coaching (Greenwood, Davids, & Renshaw, 2014). Solo internal learning situations are challenging for coaches because the effectiveness of these situations relies on the coaches' motivation and will to commit to reflective practice (Koh et al., 2015). To a certain extent, reflection can be problematic as it encourages a discourse that leads to the normalisation of ineffective practices (Cushion, 2018). Reflection for the sake of reflection may not provide

positive value for a coach's practice. This perhaps stresses the need for supporting coaches who engage in reflection (Koh et al., 2015).

Accompanied Internal Learning Situations

The findings of three studies have suggested that supporting HP coaches who engage in internal learning situations could generate value for coaching practice. First, reflective practice combined with evidence-based practice enhanced the coaches' preparation for the Olympic Games (Roberts & Faull, 2013). Second, Winfield and colleagues (2013) showed that using reflective cards to reflect on coaching practice while being mentored was beneficial for HP equestrian coaches. Finally, assisting coaches with a facilitator when they engaged in reflective practice seemed beneficial, although it did not guarantee critical reflection (Koh et al., 2015). The collective implications of these three publications suggest that facilitating internal learning situation could enhance coach learning in the HP context. To my knowledge, only one study has directly examined the implications of accompanied internal learning situations in the HP coaching context (Milistetd, Peniza, Trudel, & Paquette, 2018). Overall, this State-of-the-Art review shows that researchers are beginning to explore accompanied internal learning situations in HP coach development, but that publications on the topic are rare and exploratory in nature.

Conclusion

The aim of this review was to examine the current empirical evidence specific to the development of HP coaches according to the categorisation presented in the coach development model (Trudel et al., 2016). This State-of-the-Art review provides an overview of the current academic understanding and knowledge regarding learning situations for the development of HP coaches. Table 4 summarises the learning situations discussed in this literature review and presents my suggestion for a new terminology for identifying learning situations.

Table 4

Learning Activities Categorized by Type of Learning Situation

Learning Situations	Solo	Accompanied
Mediated Learning Situations	(not possible by definition)	Coaching Certification Education Programmes Excursions Seminars Formal Mentors <i>(by Coach Developers)</i>
Unmediated Learning Situations	Athlete Experience Observation Visual Resources Written Resources	Communities of Practice Integrated Support Team Informal Mentors Peers and Networks Performers <i>(by Learning Facilitators)</i>
Internal Learning Situations	Reflective Conversation Reflective Cards Reflective Journal Portfolio Other jobs	Guided Reflection <i>(not identified)</i>

The literature has identified actors that accompany coaches in mediated and unmediated learning situations but has yet to explore actors that could participate in the process of supporting coaches through internal learning situations. Coach developers deliver mediated learning situations, while learning facilitators lead accompanied unmediated learning at times, but who guides accompanied internal learning situations? The actor that could guide accompanied internal learning situations has not yet been identified, although some studies hint at the value of such support (Koh et al., 2015; Winfield et al., 2013).

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Chapter 4: Research Context

Research Context

The importance of sport in Canada goes back centuries. Sport is believed to be an ideal pathway to support the education and the recreation of its population. The Canadian Sport Policy (2012) reports that: “[Canadian governments] have been involved in sport since the early part of the twentieth century because they recognize sport as a powerful means of enhancing society’s health and well-being” (p. 2). This policy, set by many provincial and national federations related to sport and coaching, governs the evolution of sport. To do so, the Canadian Sport Policy advances a framework and enumerates objectives that should be attained for the five contexts of Canadian sporting culture: (a) introduction to sport, (b) recreational sport, (c) competitive sport, (d) high-performance (HP) sport, and (e) sport for development.

- *Introduction to Sport:* Clubs, schools, and local recreation organisations deliver programmes intended to introduce Canadians to organised and unorganised sport. They work on developing fundamental skills, basic knowledge, and attitudes needed for long-lasting sport participation.
- *Recreational Sport:* This context provides opportunities for Canadians to have fun, improve their health, enjoy social interactions, and take time to relax. Regional governments and cities lead these initiatives that can be participative or competitive.
- *Competitive Sport:* Participants of this context intend to develop their skills and evaluate their potential by competing against other performers in a safe and ethical environment. This context’s purpose is to provide developmental opportunities for Canadians to challenge their abilities for the next level.
- *HP Sport:* The objective of this sport context is to support Canadian athletes who are within eight years of reaching the podium at international competitions or the equivalent

in their sport (CAC, OTP, COC, & CPC, 2019). Governments are expected to provide highly specialised facilities, coaching, and services for athletes who show a high-level of commitment towards preparation for achieving excellence.

- *Sport for Development*: The Canadian culture favours the use of sport to foster leadership, humanitarian, cultural, ethical, and peaceful international initiatives. In this context, “sport is used as a tool for social and economic development, and the promotion of positive values at home and abroad” (p. 14).

Although the Canadian Sport Policy covers most sporting contexts, it is unclear where intercollegiate sport is situated within this framework. Herein, both *interuniversity sport* and *intercollegiate sport* will be used interchangeably and considered equivalent.

Picture of Canadian University Sport

At the beginning of the 20th century, university sport was already an important mean of status within Canada as shown by reflections on the Oxford-Cambridge University Tour of America in 1901:

The choice of Montreal [as a site of competition] is, of course, intriguing. On the one hand, it was a major Canadian city, and Canada was one of the places, along with Australia, New Zealand and South Africa, in which sport was to assume particular importance, it is said, in reconciling colonial nationalism with membership of the British Empire. (Benson, 2013, p. 6)

To govern rules and regulations of Canadian university sport, the *Canadian Interuniversity Athletic Union* (CIAU) was founded in 1906 (Danylchuk & MacLean, 2001). It experienced a long period of relative stability until 1944 when it broadened to a membership of 19 universities within 10 years (USPORTS, n.d.). However, member-universities had differing

visions and philosophies regarding the achievement of academic and athletic excellence (USPORTS, n.d.). Due to the lack of collaboration, CIAU ceased to exist in 1955.

The collapse of CIAU led universities to form regional associations, which led to the emergence of a national leadership for the development of university sport and to the involvement of the federal government. The mission at the centre of the rebirth of CIAU in 1959 presaged the current role of university sport within the Canadian sport system:

With financial assistance from the Federal Government, universities committed themselves to excellence in their sports programs, increased their schedules, and assigned coaches to year round programs to assist the federal government in identifying talent, provision of facilities, sport research, and testing, all with an eye on developing international competitors. (USPORTS, n.d.)

The Government of Canada's budget for intercollegiate sport increased by 1900% in the ten years following 1959 to support CIAU's effort towards becoming an HP sport platform that would support national championships and participate in world university games (USPORTS, n.d.). That is to say that Canadian intercollegiate sport has evolved towards an HP level from foundations that were focussed on combining academic and athletic excellence (Banwell & Kerr, 2016).

U SPORTS, the current governing body of interuniversity sport in Canada, has 11 full-time staff members and yearly expenditures that are slightly below 2.4 million Canadian dollars (Slack & Parent, 2015). It is composed of 56-member universities and regroups more than 14 000 student-athletes (USPORTS, n.d.). There are indicators showing that U SPORTS can be identified as a HP sport context.

First, many studies labelled Canadian university sport coaches as elite or HP coaches (Bloom, Durand-Bush, Schinke, & Salmela, 1998; Bloom, Lefebvre, & Smith, 2018; Cormier, Bloom, & Harvey, 2015; Donoso-Morales et al., 2017; Erickson, Bruner, MacDonald, & Côté, 2008; Vallée & Bloom, 2016). In their critical evaluation of the literature published regarding the definitions of elite sport, Swann, Moran, and Piggott (2015) have reported that most studies consider international and national level competition as HP sport. Canadian university athletes competing in U SPORTS are divided into four conferences and compete for 21 national championships, which would make U SPORTS an HP level according to this definition. These national championships have become the hallmark of U SPORTS (Banwell & Kerr, 2016).

Second, the athletic department of Canadian universities are now completing a transition to an HP model with an emphasis on winning (Banwell & Kerr, 2016). Athletic departments now have organisational structures that closely resemble those of national sport organisations. For instance, they have (a) a leadership group (e.g., high-performance director), (b) integrated support teams (e.g., kinesiologist, athletic therapists, mental performance coach, dietician), (c) marketing, events, and communications staff, and (d) many full-time and part-time coaches.

Third, the number of full-time U SPORTS coaches has proliferated to meet these HP expectations. For example, university football coaches in Canada are often employed full-time because they have to recruit prospective student-athletes year-round, coordinate their work with several assistants, plan the athletes' training, prepare for competitions, and participate regularly to fundraising efforts among other things (Rathwell, Bloom, & Loughhead, 2014; Sinotte, Bloom, & Caron, 2016). Notwithstanding, time implications that are substantial for coaches and athletes as they must travel long distances to compete. Teams may need to take a 10-hour bus ride or a three-hour flight to compete during their season.

Finally, it is important to mention that U SPORTS often serves as a springboard for athletes to reach national or professional teams. For athletes competing in men's football and men's hockey, a few will get drafted and/or obtain a professional contract following the completion of their years of eligibility (Football Canada, 2009; Hockey Canada, 2013). For other athletes, U SPORTS is a traditional step for reaching team Canada, such as athletes competing in women's rugby or women's hockey (Rugby Canada, 2008; Hockey Canada, 2013). Nonetheless, Canadian intercollegiate sport includes many different level, and only competitive intercollegiate sport (i.e., U SPORTS) should be considered as HP sport.

U SPORTS remains an important and unique context of the Canadian sport system although it is smaller than the NCAA in many ways (e.g. revenues, members, championships). Despite the shift to an HP model, U SPORTS remains amateur-based, non-profit, and participant-focused (Slack & Parent, 2015). This environment offers an athletic experience that differs from other HP contexts. Expectations incite participants to invest efforts for sustaining both athletic and academic performance since the leagues limit scholarships to student-athletes who achieve a pre-determined grade point average. This culture of dual excellence has pushed universities to become more and more invested in U SPORTS.

Studies on Canadian University Sport Coaches

Since the beginning of the 21st century, researchers have conducted few studies on U SPORTS coaches. Table 5 presents the studies examining coach development, coaching roles, cultures of excellence, job satisfaction, mentoring, psychosocial development, and successful coaching in that context.

It seems that to develop athletes who achieve sustained academic and athletic success, U SPORTS coaches need to :

- Master a variety of management and leadership skills, care for the athletes' holistic growth, commit to learning and sharing, and have a vision that unites and drives these three previous aspects of their coaching (Vallée & Bloom, 2005);
- Focus on the process, care about the athletes' life, and foster personal and professional growth of their athletes (Davies, Bloom, & Salmela, 2005);
- Use a coaching approach based on five pillars of performance: (a) implementing a coaching philosophy, (b) empowering athletes, (c) teaching life skills, and (d) adopting a lifelong learning mindset (Vallée & Bloom, 2016); and
- Have three common characteristics: (a) effective emotional management; (b) a sustainable culture of excellence; and (c) experiences that are crystallised through reflection (Donoso-Morales, Bloom, & Caron, 2017).

Table 5

Overview of Studies that Examined Coaches in U SPORTS

Authors (publication)	Title	Topic	Participants	Methods	Findings
Bloom et al., 2018 LMSC, NY: Routledge.	Canadian case study conversation: Mentorship in elite women's ice hockey	Coach Mentoring	1 HC (hockey) 1 AC (hockey)	Conversation	Mentoring could be improved with increasing opportunities for reflection and enhancement of tangible game-related reflections.
Callary et al., 2013 IJLE, 32(2)	Exploring coaching actions based on developed values: A case study of a female hockey coach	Coaching Philosophy	1 HC (hockey)	Semi-structured interviews	Values are based on personal and education experiences (e.g. parents' questioning; exposition to coaching context in previous jobs).
Danylchuk & Maclean, 2001 JSM, 15(4)	Intercollegiate athletics in Canadian universities: Perspectives on the future.	Future of U SPORTS	2 Administrators 2 Researchers	N/A	Canadian university sport serves the development of student-athletes as it is participant-focused. These authors do not see the amateur and participant-focused, going away.
Davies et al., 2005 IJSP, 36(3)	Job satisfaction of accomplished male university basketball coaches: The Canadian context.	Job Satisfaction	6 HC (basketball)	Unstructured interviews	There are three main aspects that influence these coaches' satisfaction: their personal characteristics and experiences, their objectives as coaches, and the current conditions in which they work.
Donoso-Morales et al., 2017 RQES, 88(4)	Creating and Sustaining a Culture of Excellence: Insights From Accomplished University Team-Sport Coaches.	Culture of Excellence	6 HC (team sports)	Semi-structured interviews	Serial winning U SPORTS coaches have three things in common: they have effective emotional management, they create a sustainable culture of excellence, and they have experience capitalised by reflection.

Erickson et al., 2007 TSP, 21(3)	Sport experiences, milestones, and educational activities associated with HP coaches' development.	Coach Development	10 HC (team sports) 9 HC (ind. sports)	Retrospective interviews	The coaches' developmental pathway was divided in five stages: early participation, competitive participation, intro to coaching, part-time coaching, and HP head coach.
Flett et al., 2010 IJCS, 4(2)	How and Why University Coaches Define, Identify, and Recruit 'Intangibles'	Psychosocial Development	6 HC (multisport) 4 AC (multisport)	Semi-structured interviews	These U SPORTS coaches valued intangible attributes, such as life skills or character development, and considered recruiting to be challenging.
Rathwell & Young, 2018 ISCJ, 15(1)	Coaches' Perspectives on Personal and Psychosocial Development in University Sport.	Psychosocial Development	14 HC or AC (multisport)	Semi-structured interviews	These coaches intentionally used strategies to foster holistic development. Coaches felt that they had to create a culture to sustain positive development, they have to develop a support network, and they have to offer indirect opportunities for development as they are dealing with adults.
Sinotte et al., 2015 SCR, 4(2)	Roles, responsibilities and relationships of full-time university assistant coaches.	Coaching Roles	6 AC (football)	Semi-structured interviews	These football assistant coaches had various roles: recruiting, athlete development, supporting the vision, acting as a sounding board, and performing various planning tasks.
Vallée & Bloom, 2005 JASP, 17(3)	Building a successful university program: Key and common elements of expert coaches.	Successful Coaching	5 HC (basketball, volleyball)	Semi-structured interviews	These coaches had a general care for their athletes while imposing high standards for instance. They showed superior effectiveness in planning while also empowering their athletes and teaching them life skills.
Vallée & Bloom, 2016 ISCJ, 3(2)	Four keys to building a championship culture.	Culture of Excellence	1 HC (basketball)	Case Report	This serial winning coach created a culture of excellence based on four pillars: enacting the vision, athlete empowerment, teaching life skills, and lifelong learning and reflection.

Further, U SPORTS coaches do experience the same pressure to win as coaches of other HP coaching context (Banwell & Kerr, 2016). They based their appreciation of their work in this environment on four aspects: their salary, their programme's exposure, their recruiting effectiveness, and their relationships with athletic directors (Davies et al., 2005).

Publications introduced in Table 5 have implications for the development and learning of Canadian intercollegiate sport coaches and can be divided into three categories: (a) examinations of coach developmental pathway (e.g., Erickson et al., 2007), (b) descriptions of successful coaching (e.g., Vallée & Bloom, 2005), and (c) reports of mentoring relationships (e.g., Bloom et al., 2018). Regarding the developmental pathway, Erickson and colleagues (2007) explained that full-time U SPORTS head coaches usually progress through five stages to reach their first head coaching position. Coaches first start by participating in many sports in various contexts from age 6 to 12. U SPORTS head coaches then continue their participation in different sports but began to compete more seriously in at least one from age 13. The third stage occurs when coaches are 19 to 23 years-old at which they usually compete at an elite level while being introduced to coaching. Fourth, U SPORTS head coaches begin to coach part-time between age 24 and 28 while they also work full-time in another field or complete a post-secondary degree. Finally, coaches earn their first full-time head coaching position at age 29 or later.

Authors also shared insights from successful U SPORTS coaches (Donoso-Morales et al., 2017, Vallée & Bloom, 2005; 2016). Vallée and Bloom (2005) found that successful basketball and volleyball head coaches constantly engaged in various learning situations, used many sources of knowledge acquisition, and created an environment that nurtured their athletes' overall growth (Vallée & Bloom, 2005). A case study of Chantal Vallée, a basketball coach who won five consecutive national championships, showed that her coaching practice relied on four

keys: (a) enacting the vision; (b) athlete empowerment; (c) teaching life skills; and (d) lifelong learning and personal reflection (Vallée & Bloom, 2016). Vallée and Bloom (2016) specified that coaches who aspire to be successful should collect feedback from anyone and invite people to comment on their coaching practice. Accomplished intercollegiate sport coaches also shared that intentionally developing a culture of excellence and effective emotional management, while engaging in self-reflection and leveraging multiple sources of knowledge of acquisition was fundamental to their success (Donoso-Morales et al., 2017). Altogether, these studies have highlighted the role of lifelong learning and reflection in developing a successful coaching practice in the U SPORTS context.

Researchers have identified mentoring as a valuable strategy for the development of Canadian university sport coaches (Bloom et al., 2018; Erickson et al., 2007). A while ago, Bloom et al. (1998) pointed out that coaches, among whom Canadian university sport coaches were, often relied on mentors throughout their development. Mentors contributed to the conception of the coaches' coaching philosophy and the advancement of their coaching practice. These interactions mainly occurred during the part-time coaching stage of their career (Erickson et al., 2007). Furthermore, Bloom and colleagues (2018) reported on a mentoring relationship between the head coach and the assistant coach of a women's hockey team in a Canadian university and found that the value was limited by the head coach's control of the conversation. The authors concluded that mentoring relationships needed to encourage more self-reflection while promoting the mentee's autonomy (Bloom et al., 2018). Overall, Canadian university sport coaches interact with mentors and benefit from those interactions, but it has limitations in terms of favouring coaches' sustainable development and learning. Development is a top priority for

coaches operating in Canadian intercollegiate sport although it may be put aside due to this new emphasis on winning (Banwell & Kerr, 2016).

Providing support to HP coaches could not only improve their coaching practice and increase their coaching knowledge, but also diminish their likeliness to quit the profession (Frey, 2007). Coaches, who feel they have the resources to meet the high expectations put on them, could have a more positive experience of stressful situations, which could enhance their odds of being successful, and continue to coach. These implications are perhaps an important concern for the athletic department of universities. Tsitsos and Nixon (2012) showed that spending important sums of money on recruiting notorious coaches leads sport programmes to reach elite status less than 50% of the time. Athletic directors would perhaps experience more success by supporting their coaches rather than changing them.

Research Gaps and Needs of Canadian Intercollegiate Sport Coaches

Overall, the development of Canadian intercollegiate sport coaches remains vastly unexplored and some areas deserved special attention. First, Donoso-Morales and colleagues (2017) explained that successful coaches engaged in self-reflection after acquiring new information from various sources to change their practice. Little has been said however about the process used by these coaches to reflect and the impact of their reflections on their practice. The research that most closely examined this topic used a single case study to explore the process of experiential learning that led to the creation of novel coaching actions (Callary, Werthner, & Trudel, 2013). Findings showed that life experiences led to the development of coaching values and a philosophy. Second, the development of Canadian intercollegiate assistant coaches has been ignored (Bloom et al., 2018). Coach development programmes have “yet to incorporate training that is specifically aimed at assistant coaches. This is unfortunate considering that many

coaches will be employed (or find themselves) in assistant coach roles at the beginning of their careers” (Sinotte et al., 2016, p. 112). Third, although coaches engage with and benefit from mentors (Bloom et al., 2018; Erickson et al., 2007), mentors often steer conversations too much. This control decreased the value created for the mentee’s coaching practice, hindered the mentee’s autonomy, and limited the mentee’s ability to engage in self-reflection (Bloom et al., 2018). Bloom and colleagues (2018) concluded by emphasising the need to test approaches that will favour a mentoring relationship that is safe for the coaches, promotes self-reflection, and develops the mentee’s autonomy.

This chapter’s objective was to delineate the main characteristics of the Canadian intercollegiate sport context and to argue that the work of Canadian intercollegiate sport coaches has particular considerations compared to other HP contexts. This context became an opportunity to examine the use of a novel and participatory strategy for supporting the development of HP coaches in their practice.

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Chapter 5: Research Approach

Research Approach

This chapter explains the research approach used to accompany Canadian intercollegiate sport coaches in their learning journeys. The action research (AR) methodology and appreciative inquiry (AI) framework are discussed in the first section, as well as the rationale behind employing these approaches within this dissertation. The second section describes the research methods used to generate and analyse data. Finally, the trustworthiness of the research design is reviewed and the reliability strategies employed throughout data generation are presented.

Methodology

The methodology employed for this research began with the design of AR that invited practitioners to learn about their coaching practice through collaboration with a researcher. The strengths-based framework of AI was then used to operationalise the AR through a four-phase process to progress along the coaches' learning journeys. Lastly, examples of initiatives that combined AR and AI are presented.

Action Research

AR is a methodology that helps researchers identify solutions that are relevant to stakeholders in their own context (Greenwood & Levin, 2000) and invite practitioners to engage in reflective practice (Glanz & Heimann, 2018). In this doctoral dissertation, AR was used in collaboration with practitioners (i.e., coaches) since the quality of AR depends on professionals and researchers collaborating on equal grounds (Reason & Bradbury, 2001). The AR methodology provides opportunities for diverse experiences, which enrich the research process, consider the context of the topic studied, and generates practical knowledge (Greenwood & Levin, 2000; Reason & Bradbury, 2001). Although AR inherently requires that researchers, professionals, and academics make many choices, quality findings result when collaborative AR

develops from an emancipatory process where people reflect and act together without coercion (Reason & Bradbury, 2001). Scholars traditionally use four steps (i.e., planning, acting, observing, and reflecting) in continuous cycles to lead AR (McNiff & Whitehead, 2011), which can be summarised as an iterative process of reflecting and acting (Reason & Bradbury, 2001).

AR is popular in the fields of health and education (Dick, 2004; Glanz & Heimann, 2018) and has been used to promote the use of reflective practice (Calhoun, 2002; Zepeda, 2012). Glanz and Heimann (2018) shared a brief historical review summarising the use of AR in the field of education:

A problem-solving strategy for improving the school organization (Corey, 1949, 1953; Lewin, 1946), as a process of individual reflection on classroom practice (Elliott, 1991), as a process to support staff development (Oja & Smulyan, 1989), as a collaborative process to support teachers' professional development (Sagor, 1992, 2011), and as a strategy to guide site-based school improvement (Glickman, 1995). (p. 358)

Sport coaching scholars have also led AR (Ahlberg, Mallett, & Tinning, 2008; Clements & Morgan, 2015; Rovio, Arvinen-Barrow, Weigan, Eskola, & Lintunen, 2012). The use of AR in coach development research has grown recently due to the impact it can have on practice (Jones, Morgan, & Harris, 2012). For instance, Erkina and Kiens (2013) used AR to develop a programme that enhanced the goal setting practices of two Finnish coaches, while Cronin and Lowes (2016) identified that coaching courses developed through AR led to an improvement of the coaches' learning experiences. Collectively, researchers have agreed that coaches can benefit from AR because the methodology is receptive to the coaches' needs while the content remains adaptive to the coaches' context (Cushion, Armour, & Jones, 2003; Evans & Light, 2008).

Appreciative Inquiry

When leading AR, Reason and Bradbury (2001) encouraged researchers to understand “it is more worthwhile to articulate the positive, life-enhancing qualities in a situation to amplify these, than to seek the problems and try to solve them” (p. 452). This positive perspective guided the development of this AR and the selection of AI as a framework. Researchers who run AI primarily use it for change management, albeit it can help accomplish other objectives, such as identifying effective practices (McCarthy & Brady, 2018) and fostering continuous development (Glanz & Heimann, 2018). Specifically for the dissertation, such a change management approach (AI) was employed to support coach learning, which maintained coherence with the theoretical framework, whereby learning was identified as change (Jarvis, 2006). To create this change, attention is focused on the causes of successes, the strengths of the learners, and the uplifting possibilities of an organisation and its members (Whitney & Trosten-Bloom, 2010). Although the AI does not focus on weaknesses of individuals, deficiencies surface as the participants attempt to realise their aspirations.

Among many other publications (e.g., Cooperrider & Whitney, 2005; Cooperrider, Withney, & Stavros, 2003), *The Power of Appreciative Inquiry* (Whitney & Trosten-Bloom, 2010) offers a practical guide to use AI. Whitney and Trosten-Bloom (2010) served as the primary reference to make decisions related to AI when designing and leading this doctoral dissertation. The AI framework is composed of four phases: (a) discovery, review strengths and successes; (b) dream, envision the best future; (c) design, identify what should be done; and (d) destiny, act to realise potential. Whitney and Trosten-Bloom (2010) recommended accompanying AI with some form of ongoing support to increase the probabilities for the participants to realise their aspirations. The eight foundational principles that drive AI are:

1. The Constructionist Principle: knowledge is created through language and conversations.
2. The Simultaneity Principle: reflections and questions produce change at the same time.
3. The Poetic Principle: topics of study are infinite, and priority is given to those topics that influence our perception of the world.
4. The Anticipatory Principle: images of the future drive people to act towards those visions.
5. The Positive Principle: positive questions and outlook generate optimal momentum.
6. The Wholeness Principle: social activities promote creativity and a collective outlook.
7. The Enactment Principle: change ensues from actions that emulate the envisioned change.
8. The Free-Choice Principle: people contribute most when they are free to participate.

Taken together, these principles suggest that an individual's strengths build the foundation of change. Change is then nurtured by inviting people to use reflections, conversations, and imagination freely in a creative and positive way. Change ultimately happens when the research process helps practitioners learn how to learn, and develop their practical knowledge (Coghlan & Shani, 2014).

Appreciative Inquiry in Sport Coaching Research. Academics have recommended AI to lead sport coaching and coach development research (Ghaye & Lee, 2016; McCarthy & Brady, 2018; Trudel, Gilbert, & Rodrigue, 2016). Trudel and colleagues (2016) argued that AI was more motivating and more generative than deficiency-based approaches, such as gap analysis. McCarthy and Brady (2018) discussed how AI could effectively create changes in

individual coaches. Ghaye and Lee (2016) further claimed that AI can foster co-creation, and learning to support performance and winning in sport.

Although numerous scholars have emphasised the value of AI, few studies show its utility in the field of sport coaching. Pill (2016) employed AI to support physical education teachers in learning and sharing about *Game Sense*. The AI framework has also served as an effective approach for positive change in other contexts, such as coaching in little league baseball in Canada, designing workshops for medical professionals in the Arab Gulf, or encouraging cooperation in Middle East and North Africa (McCarthy, 2016). These publications suggest that AI may help members of an organisation identify practices that fit within their context while simultaneously encouraging their professional development. This reciprocal process is fundamental, considering that (a) workplaces directly influence coach learning in the high-performance (HP) sport context (Rynne & Mallett, 2012) and that (b) continuous learning is essential to become a serial winning coach (Mallett & Lara-Bercial, 2016). Researchers who study coaching in sport have called for studies using a strengths-based approaches to support coach development (Bertram, Culver, & Gilbert, 2016; McCarthy & Brady, 2018; Trudel et al., 2016). To my knowledge, no study has used a positive framework that considers the conditions, context, and practice of coaches to examine their learning.

The Links between Action Research and Appreciative Inquiry

There are multiple aspects of the AR methodology and the AI framework that make them complementary and coherent. Both aim to change practice using a four-step process that includes some form of reflection and action for both researchers and practitioners. AR encourages coaches to get involved by positioning them as equals to the researchers and impacts the coaches' practice by occurring within the coach's context. On the other hand, AI is situated as a

positive and operational framework, which favours the participation of coaches since motivation could be lacking with a deficiency-based approach (Trudel et al., 2016). In other words, AI is a framework that makes AR functional, as argued in the context of educational supervision (Glanz & Heimann, 2018).

Glanz and Heimann (2018) described different types of relationships between the AR and AI. For instance, an external-internal collaboration is a partnership between external constituents (e.g., researchers) and internal stakeholders (e.g., coaches). This type of AR-AI relationship is powerful because it combines two set of resources: (a) perspectives and resources of external stakeholders, which internal stakeholders may not be able to envision or possess, and (b) the internal stakeholders' understanding of the context and exclusive access (Glanz & Heimann, 2018). For this collaboration to be successful, external stakeholders must be highly available whereas internal stakeholders must be committed to this change process. Pill (2016) provided one example of such a collaboration as a researcher (i.e., external stakeholder) who used AI and AR to produce generative ideas for physical educations teachers (i.e., internal stakeholders) to coach *Game Sense*. To my knowledge, no HP coach learning research has used such a methodology.

Considering the previous explanations of the research approach, the learning journey took place in four phases (see Table 6), which were grounded in the structure of AI and are detailed in Article Two. This research approach addressed previous empirical limitations as it integrated the environment and the conditions of coaches with the process of change. This developmental approach was built concomitantly while the sport coaches, aided by a learning companion, reflected on their coaching practice. Key points of this new developmental approach include: (a) the sport coach was free to participate and not obligated; (b) the content

Table 6

Overview of the Research Structure

Action Research	Appreciative Inquiry	Learning Journey	Data Generation
Planning			
Acting & Observing	Discovery	Inception	Narrative Interview <i>(Appendix A)</i> Archival Data Collection Video Recordings Video Self-Presentation <i>(Appendix B)</i> Archival Data Collection
	Dream		Preparation
	Design	Coaching Conversation	
Reflecting	Destiny		Debriefing

matched the sport coaches’ ongoing challenges (just-in-time); and (c) the sport coaches were supported by a personal learning coach (PLC) who nurtured the co-creation of context-specific knowledge and strategies. To perform this role effectively, the PLC based his work on Narrative Collaborative Coaching (NCC) principles, explained below.

Methods

Participants

Convenience sampling was used to recruit Canadian intercollegiate sport coaches who worked for a university located in the Eastern part of Canada. A recruitment letter was sent to the

HP director of the university athletic department, who answered the request to meet positively. The lead researcher and director then met in person to discuss the accepted research proposal at the end of which the HP director approved the project. The HP director subsequently coordinated two meetings for the lead researcher to present the research project, its purpose, and its potential implications to the intercollegiate sport coaches. The lead researcher then met with the identified coaches, and recruited those who were willing to participate in a 12-month AR project. Coaches were explicitly told that participation was not mandatory and that they could drop out of the project at any time; although, they were expected to engage in all phases of the research if it was possible. Throughout the research process, participants' integrity and freedom of participation was ensured as established by the Tri-Council Policy Statement (CIHR, NSERCC, & SSHRCC, 2014).

From these two introductory meetings, seven intercollegiate sport coaches verbally committed to participate in the research project. Smaller samples are frequent in qualitative coach development research since this type of research can allow for a complex appreciation of the participants' experience and context (e.g., Bertram et al., 2016; Callary, Werthner, & Trudel, 2012; Koh, Mallett, Camiré, & Wang, 2015). Therefore, this sample size was considered adequate to reach a level of depth that would help achieve the purpose of the doctoral dissertation. The lead researcher then scheduled an introductory meeting with each committed coach to review the implications, introduce the first action points, and sign the consent form. One coach never followed-up on the commitment made at the end of an introductory meeting, therefore, six coaches signed the consent form (see Appendix H). Out of the six coaches who remained, I used the real name of only one coach, Jennifer, per our authorship agreement for Article Three. Not only did Jennifer express a desire to participate in the publication process, but

Table 7

Demographics of Participants

Coach	Gender	Age	Education	Coaching Experiences	Years in Role
Jennifer	Female	42	BSc Chemistry B.Ed High-School	Junior college HC (3) National U20 HC (2) University HC (3) National AC (1)	3 (HC)
Gary	Male	38	B.Sc Human Kinetics B.Ed High-School	Youth AC (1) University AC (1) University HC (1)	1 (HC)
Eric	Male	41	B.A Human Kinetics B.Ed High-School	High-school HC (7) Senior HC (5) Provincial HC (2) Junior college HC (3) University HC (6)	6 (HC)
Brian	Male	30	B.Sc Kinesiology	Junior AC (4) University AC (2)	2 (AC)
Francis	Male	31	LL.B Civil Law LL.L Civil Law	High-school AC (2) High-school HC (4) Junior college HC (6) University AC (4)	4 (AC)

she also gave full consent at the beginning of the research. All references to the other coaches are pseudonyms to maintain their anonymity: Gary, Eric, Francis, Brian, and Julian. Table 7 introduces the main characteristics of each coach who participated in the AR.

Six coaches participated in the first planned activity (i.e., the autobiography). One coach, Julian, had to withdraw from the project for a health reason. The five remaining coaches (4 male, 1 female), who completed the 12-month AR, played an integral role in designing their learning

activities, their learning journeys, and creating value for their practice. The coaches were full-time coaches of team sports; three were head coaches (HC), and two were head assistant coaches (AC). Three participants coached hockey (Gary, Eric, Brian), one participant coached basketball (Francis), and one participant coached rugby (Jennifer).

Narrative-Collaborative Coaching (NCC)

In the sport coaching field, there is a lack of validated approaches to support coaches' learning from their coaching practice. NCC can be a useful strategy to perform this role because it is intended to facilitate co-creation between the PLC and the sport coaches in a safe reflective space (Stelter, 2014). NCC was used as the method for leading the coaching conversations with the sport coaches. Extensive details on the procedure used in this doctoral dissertation are provided in Article Two and Three (Rodrigue & Trudel, 2019; Rodrigue, Trudel, & Boyd, 2019, respectively).

Data Generation

Many data generation methods were used: audio recordings, video recordings, archival data collection (e.g., emails), notes from phone calls, and memoing (see Table 6). Constant negotiation between researcher and participants influenced the methods of the data generation used, the research artefacts produced, and the coaching topics covered. Digital documents were saved in a password-protected section of a notebook in OneNote software and physical documents were held in a binder located in a locked office of the research's institution.

The interviews were audio recorded. The participating coaches first performed narrative interviews with the lead researcher, as overviewed in Article Two, to initiate the *inception* phase. Narrative interviews are key in accessing the tacit knowledge of professionals (Perret, Berges, & Santoro, 2005). The narrative interview guide was built to grant the freedom to explore

unexpected areas of insights by allowing conversations to flow (see Appendix A). Digital video recordings were also collected during the *inception* phase (i.e., Discovery, and Dream). These video recordings were used to facilitate a video self-presentation by each coach regarding their coaching practice. This activity invited the participants to describe their coaching style to then stimulate discussions about elements that the coaches considered strengths and areas to improve. Overall, this activity was intentionally designed this way to reduce reliance on memory recall and to enhance shared understanding. The activity design also helped the coaches notice tacit elements of their practice, and enhanced the collaborative learning experience as recognised by other researchers (Carson, 2008; Cushion & Townsend, 2019; Mead, Spencer, & Kidman, 2016).

Two additional semi-structured interviews were performed throughout each of the participants' year-long collaboration. The first semi-structured interview occurred during phase two, *preparation* (i.e., Design). The interview guide was built to help the coaches identify preferred coaching topics, and to help the dyad to develop a productive shared understanding (see Appendix C).

Sessions that occurred in the next phase, *coaching conversation* (i.e., Destiny), were facilitated using a guide that qualitative researchers would qualify as an unstructured interview guide (Stelter, 2014; see Appendix E). This flexibility is typical of NCC since it aims to create a generative conversation emerging from a collaborative process of reflection (Stelter, 2014, 2016).

The second semi-structured interview was designed to debrief the coaches' entire journey with a PLC, and it thus completed the fourth phase, *debriefing*. In debriefing that phase, a matrix of the coaching topics and subtopics covered during the journey was assembled and sent to the coaches to facilitate participant recall (see Appendix G). The second interview guide (see

Appendix F) was adapted from other publications (Bertram, 2016; Wenger, Trayner, & de Laat, 2011).

The lead researcher decided to design the duration of the research project, and data generation, to 12-months for three reasons. First, coaching scholars have called for longitudinal qualitative research because it enhances the grasp of the contributions made by learning activities to the development of coaches (Hussain, Trudel, Patrick, & Rossi, 2012; Jones, Harris, & Miles, 2009; Koh, Mallett, & Wang, 2011). The year-long duration answered this call. It also favoured the observation of an evolution in the coaching topics explored by coaches while allowing changes in coaching practice to happen, and thus be assessed (Wenger-Trayner et al., 2011). Second, the lead researcher and the thesis supervisor judged that the 12-month duration would enable data generation that would reveal how the companionship evolved over time, as well as reveal the different implications it had depending on the phases of a season. Data generation covered a full coaching cycle by comprising all phases of a sport season (i.e., training camp, regular season, playoffs, and off-season). Finally, this duration was believed to create a time commitment that was inviting to participating coaches and that allowed the lead researcher to complete his doctoral dissertation within five years.

Data Analysis

This section is divided into two sub-sections that each overview the form of analysis that was employed to analyse data specific to both research questions. The first research question examined the process of developmental coaching and data were analysed using narrative analysis. The second research question examined outcomes of developmental coaching and deductive thematic analysis was conducted using the value creation framework to interpret data.

Process of developmental coaching. Data relevant to the full story of the partnership with the five coaches came from the audio recordings of the learning activities and coaching conversations, archival data of email exchanges, notes and memos generated during calls, impromptu meetings, and other interactions. To analyse this data, narrative analysis was used. Narrative analysis focuses on the participants' flow of experience and tries to interpret the sequence in which these participants engaged in the activities (Schutt, 2012). This analytical strategy is recommended when single elements of a phenomenon examined cannot be isolated (i.e., they all interact and influence one another) and multiple data points (e.g., documents, audio, videos) are collected (Schutt, 2012). In addition, narrative analysis "seeks to preserve the integrity of personal biographies or a series of events that cannot adequately be understood in terms of their discrete elements (Riessman, 2002, p. 218). McAdams (2012) explained that narrative analysis helps to understand how participants make sense of their lives; to then understand the psychological, social, and cultural meaning of their lifelong story. Furthermore, narrative analysis is a strategy that helps to describe a phenomenon that is relatively unknown, which in this case is the experience of intercollegiate sport coaches participating in developmental coaching.

To conduct a narrative analysis, the lead researcher listened to audio interviews, read documents several times, and then classified those stories into general value creation stories (Schutt, 2012). Inductive strategies are recommended when answers are not straight forward, such as with narrative, unstructured, or semi-structured interviews (Silverman, 1998). The process of narrative analysis involved: (a) reading the autobiography and listening to the narrative interview several times, (b) taking notes and developing ideas of how conversations specific to a single participant are inter-related, (c) taking notes and developing ideas about how

the narrative of the participants was connected to the other participants, and (d) moving on to the next piece of data (McAdams, 2012). Reliability was checked using classification and discussion between the lead researcher and the thesis supervisor.

Outcomes of developmental coaching. Wenger-Trayner and colleagues (2011) presented a framework for assessing value creation generated in social learning activities and interactions. This tool, developed both for research and practice, focuses on the stories behind the value created for learners. According to Wenger-Trayner and colleagues (2011), the distinct narrative of each learner underpins what they valued in the learning activities for their professional practice. To operationalise this perspective of assessing learning activities, the original value creation framework differentiates between five types of value-creation cycles.

1. Immediate Value: Activities and interactions that produce enjoyment, provide answers to a specific question, and/or display another perspective.
2. Potential Value: The learning activity produced latent value for the learner, whether in the form of human, social, tangible, reputational, or learning capital.
3. Applied Value: From the initial activity or some interactions, learners made concrete changes to their practice by developing a new tool, adopting a different approach, modifying the systems in place, or simply performing other actions.
4. Realized Value: This type of value captures performance improvement that brought learners closer to achieving the outcomes set out by their stakeholders.
5. Transformative Value: Value is created when learning activities and/or interactions provoke a reconsideration of success, a review of the performance indicators, or a transformation of perspectives.

A more recent version of the value creation framework also includes two other types of value (Wenger-Trayner, Wenger-Trayner, Cameron, Eryigit-Madzwamuse, & Hart, 2017):

6. Strategic Value: Learning that influences the ability of stakeholders to accomplish their objectives and make a difference.
7. Enabling Value: Value that enhances the support provided for the learning activity or that enabled the learning activities to take place.

Although findings and conclusions related to the coach's career advancements (e.g., strategic value) may be identified and that some factors may help facilitate this project or some learning activities (e.g., enabling value), these two values were not analysed because this went beyond the scope of this doctoral dissertation and were not considered at the time of designing the research approach. The most important aspect for the assessment of the outcomes was to analyse the value creation stories of the coaches' learning journeys in depth rather than examine the long-term impact or the immediate environment.

The value creation framework is a comprehensive form of analysis that enables researchers to illustrate the complexity of the outcomes produced by learning activities. To articulate the impact of learning activities, two concepts are important to understand: value-creation stories, and value-creation cycles. *Value creation stories* are shown by data that cover all value-creation cycles and can include many learning activities (Wenger-Trayner et al., 2017). *Value-creation cycles* refer to the type of value that has been created by the learning activity (e.g., applied, realised). Specifically, value-creation stories and cycles are not independent, and learning is a non-linear endeavour in this framework's perspective. Each value-creation cycle is a learning opportunity that has the potential to influence outcomes of all other past, present, or future learning activities.

Data relevant to the second research question comes from the debriefing interviews. Deductive thematic analysis was used to associate answers provided by each of the five coaches with the value-creation cycles (Braun & Clarke, 2006; Braun, Clarke, & Weate, & 2016). The six-step process included: (a) becoming acquainted with the data by transcribing, reading the transcripts numerous times, and noting down ideas; (b) generating initial codes that were each of the seven value-creation cycles (Wenger et al., 2011); (c) aggregating these codes into preliminary value-creation stories specific to the learning activities and coaching conversations performed; (d) reviewing the coherence and interaction of themes by manually creating a thematic map; (e) defining and naming themes (i.e., value-creation stories) with the intent of creating a trustworthy representation; and (f) producing a report linking the themes to the research questions and the literature using insightful quotes.

Trustworthiness

Research Design

Controversies surround the concept of validity and control in qualitative research (Lincoln, Lynham, & Guba, 2018). No methodology can ensure validity for research examining social constructs, such as sport coaching. Validity is thus understood as building trustworthiness of the process used to complete the research, using an interpretational strategy coherent with the research paradigm, and demonstrating agreement with research methodologies employed in the field (Lincoln et al., 2018).

New paradigms also challenge the traditional perspective of control in research, which was previously given unilaterally to researchers. Modern qualitative researchers often conduct collaborative or participant-led studies, which change the relationship between object, coach learning, and subject, coaches and researcher. In this AR, control was researcher-led in the first

two research phases, *inception*, and *preparation*, and equally shared in the coaching conversation and debriefing phases. Considering that validity is a restrictive concept that emphasises the adequacy of instruments, trustworthiness seemed a more adequate objective for ensuring the qualitative quality of this research. An AR study is considered trustworthy when it creates change in the participants' practice in fields that study social realities (Bradbury & Reason, 2001). Therefore, the trustworthiness of this current research was grounded in the production of trustworthy accounts of the research, unique stories with varied results, and was evaluated on the research's ability to produce change, create value, for the participants. The qualitative quality of this doctoral dissertation was considered adequate as it displayed trustworthiness, it created change for the participants, and it was congruent with this research's ontological position.

Trustworthiness Strategies

In addition to a rigorous, coherent, and approved research design, qualitative research can insure trustworthiness by using multiple methods and by conducting critical evaluation during the research (Kemmis, 2006). Considering this, the following strategies were used: researcher's reflective journal, triangulation, and member reflections.

Researcher's reflective journal. Consistent with other strategies, a researcher's reflective journal was used to enhance the lead researcher's ability to support the process of the participants' journeys, stimulate value creation, and ensure coherence with the research paradigm. Janesick (2011) recommended such journals to help researchers enhance their awareness of their role and improve their understanding of the participant's involvement in the research. The lead researcher began to write entries on January 10th, 2017 and wrote the last entry on October 26th, 2017. The journal contains 103 entries and is 76 pages long (see Appendix

L for examples). It contains reflections pertaining both to the coaches' participation and the researcher's ability to complete his doctoral dissertation.

Triangulation. The lead researcher has used two forms of triangulation to ensure the trustworthiness of this doctoral dissertation: data triangulation and methodological triangulation (Mathison, 1998). Data triangulation refers to the use of multiple data sources. In this research, data were generated from multiple sources: audio recordings of interviews and coaching conversations, video recordings of the participant's coaching interview, memoing, and archival data collection of emails. Methodological triangulation is using multiple methods (e.g., video observation, interviews, archival data collection) for conducting the research. Lincoln and colleagues (2018) underlined that using multiple methods is an effective strategy to assure the trustworthiness of qualitative research.

Member reflections. To increase trustworthiness, the lead researcher sent debriefing interview transcripts and value creation tables to all participants for member reflections (Smith & McGannon, 2018). Authors have recommended member reflections as a powerful strategy for enriching the findings of qualitative studies (Smith & McGannon, 2018), and sport psychology research (McGannon, Smith, Kendellen, & Gonsalves, 2019). Member reflections make such contributions because they invite participants to collaborate with researchers in a process of exploring the current to obtain additional currently unexplored insights (Smith & McGannon, 2018). In short, this strategy was designed to invite participants to expand upon their learning journey and the value creation stories generated from data analysis.

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Chapter 6: Findings

Presentation of the Articles

In September 2014, I began my doctoral journey with the aim of studying high-performance coach development. The first few years were centered around familiarising myself with the literature in sport coaching, coach development, and coach learning as I was entering a new field after having obtained a Master of Arts in Sport Management and a Bachelor of Science in Human Kinetics. One of the important publications with which I had to familiarize myself with was *Theory of Lifelong Learning*, published by Peter Jarvis (2006; 2007; 2008). Jarvis (2006) believes that lifelong learning is a process of becoming, which also characterizes the process of completing a doctorate and producing a doctoral dissertation. The manuscript of this dissertation was five years in the making.

The cumulative work and learning of five years of doctoral study led to many presentations at national and international conferences:

1. He, C., Rodrigue, F., & Trudel, P. (2015, March). Concept maps: A tool to capture and represent coaches' knowledge. *AASP International Regional Conference*. Address conducted at Eastern Canada Sport and Exercise Psychology Symposium 2015, Ottawa, Canada.
2. He, C., Rodrigue, F., & Trudel, P. (2015, August). Using a concept map to picture a coach's cognitive structure. *International Council for Coaching Excellence*. Address conducted at Global Coach Conference 2015, Vierumäki, Finland.
3. Rodrigue, F., & Trudel, P. (2017, August). Learning to Reflect as a University Football Coach: Challenges and Benefits of Using Reflective Cards. *International Council for Coaching Excellence*. Address conducted at Global Coach Conference 2017, Liverpool, United Kingdom.

4. Rodrigue, F., & Trudel, P. (2017, August) The Future of Reflective Practice for High-Performance Sport Coaches. *International Council for Coaching Excellence*. Address conducted at Global Coach Conference 2017, Liverpool, United Kingdom.
5. Rodrigue, F., & Trudel, P. (2018, June) University coaches' perspectives on their use of reflective tools. *United States Center for Coaching Excellence*. Address conducted at North American Coach Development Summit 2018, Orlando, United States of America.
6. Rodrigue, F., & Trudel, P. (2019, October) Initiating individualized coach development: Accompanying coaches in university sport. *International Council for Coaching Excellence*. Address conducted at Global Coach Conference 2019, Tokyo, Japan.
7. Santos, Y., Shaikh, M., Rodrigue, F., Culver, D. M., Séguin, C., Nash, C., Milistetd, M., Ciampolini, V., Brasil, V. Z., & Galatti, L. R. (2019, October). A review of literature on international coach education programs 2010-2019. *International Council for Coaching Excellence*. Address conducted at Global Coach Conference 2019, Tokyo, Japan.

Together, these seven conference presentations focused on three main areas of coaching research: (a) reflective tools, such as concept maps and reflective cards, (b) the development of university sport coaches, and (c) coach education programmes.

Beyond those presentations, this five-year doctoral journey led to the production of seven manuscripts:

1. Rodrigue, F., He, C., Trudel, P. (2015). Concept Mapping: Its use for High Performance Sport Coach Development. In Davis, P. (Eds.), *The Psychology of Effective Coaching and Management* (p. 72-90). Happaugue, NY: Nova Science Publishers.

2. Trudel, P., Gilbert, W., & Rodrigue, F. (2016). The journey from competent to innovator: Using appreciative inquiry to enhance high performance coaching. *AI Practitioner*, 18(2), 40-46.
3. Rodrigue, F., & Kraft, R. (2017). Coaching Better Every Season: A Year-Round System for Athlete Development and Program Success. *International Sport Coaching Journal*, 4(2), 258-259.
4. Rodrigue, F., & Trudel, P. (2018). Reflective Practice: A Case Study of a University Football Coach Using Reflective Cards. *LASE Journal of Sport Science*, 9(1), 39-59.
5. Rodrigue, F., Trudel, P. (2019). A 'personal learning coach' for high-performance coaches: A companion to reflect and learn from one's own coaching practice. In B. Callary & B. Gearity (Eds.). *Coach Education and Development in Sport: Instructional Strategies* (pp. 141-153). Oxon, UK: Routledge.
6. Rodrigue, F., Trudel, P., & Boyd, J. (2019). Learning From Practice: The Value of a Personal Learning Coach for High-Performance Coaches. *International Sport Coaching Journal*, 6(3), 285-295.
7. Rodrigue, F., Trudel, P., & Culver, D. (submitted). Coaching high-performance sport coaches: The 12-month learning journey of two intercollegiate head coaches. *Journal for the Study of Sports and Athletes in Education*.

These peer-reviewed articles and book chapters contributed to the scientific knowledge on high-performance coach development and reflective tools available for coaches to deliberately reflect on their coaching practice.

These productions all contributed to the process of writing the final version of this doctoral dissertation, as this thesis consists of a series of articles. Considering that the number of

manuscripts published during my doctoral journey went beyond the required three to four articles for submitting a doctoral dissertation, choices among these publications had to be made. In what follows, I present the reasons why I chose to include the four selected articles.

Article One

Article One – Reflective Cards

Following the acceptance of my thesis proposal, it became evident that the doctoral dissertation would focus on helping high-performance coaches deliberately reflect on their coaching practice. In doing that, coaches can benefit from the use of various reflective tools (Knowles et al., 2014). Among the variety of reflective tools available to coaches, reflective journals often appear in the literature (see Chapter 3; Koh, Mallett, Camiré, & Wang, 2015; Kuklick, Gearity, & Thompson, 2015). However, the literature provides few examples of the other tools. I have personally contributed to two presentations and one book chapter that overviewed concept maps as a reflective tool (He, Rodrigue, & Trudel, 2015a; He, Rodrigue, & Trudel, 2015b; Rodrigue, He, & Trudel, 2015). Thus, I desired to explore another reflective tool, and to learn about the process of developing and adapting reflective cards to the coaching practice of high-performance coaches. I therefore considered studying the use of reflective cards, as I had previously used them in my sport coaching practice. This exploration was essential because reflection is central to narrative-collaborative coaching (Stelter, 2014).

The purpose of the study described and discussed in Article One was to prepare myself to act as a personal learning coach and to enhance my ability to support coaches in their use of reflective tools. Two research questions were central to this study : (a) What are the challenges and benefits of using reflective cards as a Canadian intercollegiate football coach during one

competitive season?; and (b) How does a Canadian intercollegiate football assistant coach develop and adapt a reflective tool to help him to reflect on his coaching practice?

Although this study embraced the same research paradigm – participatory – as the research approach presented in Chapter 5, the methodology of the study presented in Article One differed. The methodology was an intrinsic case study (Stake, 2000). An intrinsic case study is valuable when the case studied – me, the personal learning coach – and its understanding are interesting and meaningful to the researcher (Stake, 2000). Thus, I set out to examine my use of reflective cards within my sport coaching practice during the 2016 U SPORTS Canadian football competitive season, which ran from August 2016 to October 2016. Paulhus and Vazire (2007) argued that self-report studies are astute when the exploration focuses on the participant and requires rich information. No one is better situated to access information on the case than the participant himself which, in this study, enables the depiction of a rich picture of the use of reflective cards. Paulhus and Vazire (2007) also underlined the notion that self-report studies allow researchers to include emotions better than other forms of data generation. Emotions are central to reflection and learning, as emphasized by Jarvis (2006), with the modes of learning being *thinking*, *acting*, and *feeling*. First, the results of this study suggest that it enhanced my ability to support coaches in using reflective tools to deliberately reflect on their coaching practice, and hence prepare myself for acting as a personal learning coach. For instance, Brian used a similar version of a reflective card to support his coaching practice in the second half of the 12-month learning journey. Second, my use of reflective cards acted as a catalyst for changing my coaching practices, although continuous reflection was challenging due to daily chaos. Finally, the results showed that the process of developing and adapting a reflective tool was helpful for learning about reflective practice and continuously engaging in it. This process

did prepare me to act as a personal learning coach, and did improve my ability to support coaches in adapting reflective tools to their coaching practice. Article One is published in the *Latvian Academy of Sport Education Journal of Sport Science* (Rodrigue & Trudel, 2018).

Articles Two to Four

Data generation for the research approach presented in Chapter 5 began in January 2017. At this time, I met with the high-performance director of the athletic department of a Canadian university. The high-performance director then sent an invitation, which was optional, to all full-time coaches of his institution to attend the introductory presentation of this research project. During this brief presentation, I provided an overview the study's theoretical framework and the structure of the research approach. Out of the 12 coaches who attended the introductory meeting, seven coaches verbally committed to participate in the research project at the end of the meeting. However, one coach never followed up on ensuing requests to meet. Another coach had to put an end to his participation due to a severe health issue. It was expected that the coaches' biographies would influence their desire to participate, or not, in this new developmental approach (Jarvis, 2006).

There was, thus, five coaches who participated in the entire 12-month learning journey from which data was generated. A broad analysis of their learning journeys was done for all of them. The results are presented in Article Two – a book chapter. I then realized that it would be difficult to present a new approach, the five coaches' journeys, and the outcomes of each coach's learning activities within one article. The amount of data generated for each coach (i.e., coaching conversation sessions, interviews, emails, phone calls, etc.) combined to the depth of the narrative and deductive thematic analysis made this impossible. Therefore, for purposes of publishing Article Three and Article Four, I had to choose from among the five coaches' result

so that I would have enough space to thoroughly explain this new developmental approach. I decided to focus on the head coaches' learning journeys and value creation stories upon writing those manuscripts. Due to the conditions of their coaching role, assistant-coaches had a limited ability to generate applied value. In addition, both assistant-coaches changed roles over the summer, with Brian completely changing coaching context. I present a rough version of the evolution of the learning journeys of Brian and Francis in appendices (see Appendix M; N). Data relevant to these two assistant-coaches may be used for future publications. The journeys and value creation stories of Jennifer, Gary, and Eric are, thus, presented across three publications.

Article Two – Methodology

Article Two describes a procedure for using narrative-collaborative coaching within an appreciative inquiry framework to accompany high-performance sport coaches – a group of intercollegiate sport coaches – in their learning (Rodrigue & Trudel, 2019). This manuscript is published as a book chapter in an edited book entitled *Coach Education and Development in Sport: Instructional Strategies*.

Article Three – Jennifer Boyd

The third article presents the process (i.e., journey) and outcomes (i.e., value) of Jennifer's 12-month learning journey of being accompanied by a personal learning coach (Rodrigue, Trudel, & Boyd, 2019). We decided to describe Jennifer's participation for many reasons: (a) Jennifer also coaches the national team; (b) her participation led to the generation of a complete and rich value creation story; (c) Jennifer was successful during that year; (d) Jennifer's story adds a case of a successful female coach to the literature; and (e) Jennifer manifested an interest in graduate studies and publishing scientific articles. Article Three is

published in a special issue, *Global Advances in Coach Education*, of the *International Sport Coaching Journal*.

Article Four – Two Head Coaches

Finally, Article Four presents the results of the 12-month learning journeys of two intercollegiate ice hockey head coaches. These head coaches participated in the same action research and were coaching in a similar coaching context. Yet, their participation has evolved differently. A fact apparent in the various value creation stories that were generated from their participation and that are the focus of this manuscript. According to Wenger-Trayner and Wenger-Trayner (2019), it is essential to be able to communicate the outcomes of a learning process using powerful and complete value creation stories. This fourth manuscript was submitted to the *Journal for the Study of Sports and Athletes in Education*.

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Article One

Reflective Practice: A Case Study of a University Football Coach using Reflective Cards.

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Abstract

Justification and aim of the study: Sport coaches struggle to integrate reflective practice. To reflect, coaches can choose from multiple tools: concept maps, reflective journals, or reflective cards (r-cards) to name a few. One persisting challenge is for coaches to allocate time to reflect. R-cards present an interesting avenue for coaches because they require little time. Nonetheless, few empirical studies have documented the use of r-cards. The purpose of this study was to document the experience of a high-performance Canadian football coach's use of r-cards.

Material and methods: The authors conducted an intrinsic case study of the first author's – a Canadian football assistant coach – use of r-cards. Data collection included 52 r-cards from post-practice (n = 46) and post-competition (n= 8) reflections that were analysed using a conventional content analysis. **Results:** The findings detail three aspects of the coach's use of r-cards. The first section describes the development and adaptation of the r-cards to the coach's practice. Second, the authors describe one post-practice and post-competition example and provide an overview of the coach's use of each section of the r-cards. Finally, the coach presents his reflections on the challenges and benefits of using r-cards as a high-performance coach.

Conclusion: The coach saw several benefits to the use of r-cards even though it was challenging at times due to redundancy and prioritization.

Keywords: reflective practice; reflective cards; coaching; high-performance.

Introduction

Engaging in continuous learning is important for achieving professional success. Schön (1983, 1987) proposed that reflective practice, the ability of practitioners to continuously learn from previous actions, is crucial for ensuring continuous learning. Although researchers across numerous fields of study suggest that reflective practice is an effective development strategy, there is a lack of empirical studies on its implementation (Saury & Durand, 1998). Specific to sport coaching, the growing number of calls advocating for the integration and importance of reflective practice for developing coaches (Gallimore, Gilbert, & Nater, 2014; Irwin, Hanton, & Kerwin, 2004; Knowles, Katz, & Gilbourne, 2012) contrasts with the limited reports on how coaches actually engage in it. Nevertheless, Knowles, Gilbourne, Cropley, and Dudgeon (2014) proposed that the process of becoming a successful sport coach depends on the ability to become a reflective practitioner.

Coaches must develop reflective skills (Cushion & Nelson, 2013) because they help, among other things, to shape intrapersonal knowledge; the ability to understand yourself as a coach while improving upon your coaching skill (Gilbert & Côté, 2013). For Gallimore et al. (2014), reflection is “the pondering, reviewing and questioning of their experiences that prompts individuals to adapt and change their behaviours in subsequent action” (p. 269). This definition is important to remember because it helps to differentiate between thinking, ruminating, and reflecting about an experience (Werthner & Trudel, 2009). It also suggests that “competent practitioners will not limit their effort to a trial and error approach but will enter into a reflective process” (Gilbert & Trudel, 2006, p. 115) that will connect all aspects of their profession. In other words, “it would be wrong to assume that simple exposure to a professional experience will bring about learning” (Miles, 2011, p. 110).

Using Schön's conceptual framework (1983,1987) to conduct studies in sport coaching, Gilbert and Trudel (2001, 2004, 2005, 2006) identified three types of reflection: reflection-in-action, reflection-on-action, and retrospective reflection-on-action. Reflection-in-action is to transform observations into actions while performing an activity. Schön (1983) explained that, in some circumstances, reflection-in-action might have some limits because it can paralyze practitioners and hinder the quality of behaviours in the moment. Nonetheless, reflection-in-action can help coaches process information and improve their behaviours in real-time (Whitehead et al., 2016). By contrast, reflection-on-action is when reflection occurs following professional activities. The timing of this approach's application is helpful because practitioners can examine more areas of their practice (Schön, 1983). For instance, Irwin et al. (2004) showed that reflection-in-action is a valued source of learning by individual coaches after discussions with coaching colleagues. Taylor, Werthner, Culver, and Callary (2015) also showed that the utilization of both reflection-in-action and reflection-on-action lent parasport coaches a sense of clarity in their thought process. Lastly, a coach may engage in retrospective reflection-on-action at a point in time when they are not able to influence the events any longer. Although this approach may be helpful for future seasons, this technique does not improve current coaching practice.

Reflection-on-action is particularly important for coaches since it enables improvements from one training or competition session to the next. Reflection-on-action can help coaches deal with emotions and bridge the gap between their practice and coaching knowledge (Knowles, Tyler, Gilbourne, & Eubank, 2006). It can support a coach's decision-making processes when faced with having to make difficult decisions (Roberts & Faull, 2013). Reflection-on-action can also help coaches with understanding interactions with players, coaching identity, as well as critically reviewing events from the previous day (Peel, Cropley, Hanton, & Fleming, 2013).

Considering this, it becomes relevant to have a look at the various reflective tools available for coaches to engage in reflection-on-action. Authors have suggested many tools, such as concept maps, reflective journals, and reflective cards (r-cards; Gilbert & Côté, 2013; Telfer & Knowles, 2009; Rodrigue et al., 2016). Although Gilbert and Côté (2013) suggested that concept maps were a valuable tool for assessing a coach's knowledge, concept mapping can be useful to reflect as well. Rodrigue, He, and Trudel (2016) explained that concept mapping helps sport coaches manage their knowledge as it forces them to represent and negotiate the meaning of concepts. Concept mapping is a structured top-down approach that examines the unique relationships between concepts relevant to a specific subject (Eppler, 2006). However, concept mapping may present some challenges when aiming to reflect on action. Concept mapping must be learned and practiced in order to be effective and efficient. Its power may depend on the introduction by a facilitator or the investment of a significant amount of time. This seems to make it a tool suited for retrospective reflection-on-action rather than reflection-on-action.

The handiness of a reflective journal makes it an effective and favoured tool for reflective practice (Telfer & Knowles, 2009). Reflective journals usually contain a set of open-ended questions that guide the coach's reflective process (Koh, Mallett, Camiré, & Wang, 2015). Although it can be useful for reflection-on-action, its appeal and effectiveness are questionable. Coaches struggle to continue to reflect on their practice through a reflective journal because of a lack of time (Knowles et al., 2006). Knowles and colleagues (2016) reported that some had to modify their reflective strategy to continue its use. A reflective journal may also become monotonous for a more experienced professional (Knowles et al., 2012). Nonetheless, Kuklick, Gearity, and Thompson (2015) showed that an online reflective journal helped to improve the efficacy of reflective practice in a coach education program.

These reflective tools have apparent benefits, but coaches perceive their use as time consuming and boring at times. In fact, Burt and Morgan (2014) identified 99 examples of barriers to reflective practice that they grouped into one of four different categories: workload, incentives, enforcement, and support. The workload category reinforced the concerns about the time available for reflective practice. Reflecting remained of secondary importance for many coaches because it competes with time needed to complete other important work (Knowles et al., 2006; Rynne & Mallett, 2012). Interestingly, Hall and Gray (2016) conducted an action research on reflective practice and explained that it should be concise (less than half an hour), specific (limited and focused objectives), and deep (ask hard questions).

Reflective Cards

R-cards may present interesting benefits to sport coaches. This tool consumes little time while providing enough structure to generate effective reflections (Ghaye, 2009). Two empirical studies have examined the implementation of r-cards with three equine coaches (Hughes et al., 2009; Winfield et al., 2013). Hughes and colleagues (2009) showed that coaches struggled to use r-cards at first, but they appreciated them more as they were exposed to them more often. The r-cards made coaches more aware of their reflective processes while focusing their reflections on coaching competencies, and also helped coaches develop critical thinking skills. Winfield and colleagues (2013) explained that r-cards counteract the isolation that coaches can experience as the leaders of a club. Coaches in this position rarely receive feedback, whereas such needed feedback can be generated from use of r-cards. Recently, Koh, Chew, Kokkonen, and Chew (2017) also studied the use of r-cards by one head coach and 12 players of an elite youth basketball team. Participants perceived the use of r-cards as valuable because it helped them identify weaknesses and recognize effort levels. Nonetheless, participants considered some

reflective questions as being detrimental to the value of r-cards because they did not see the relevance for their work.

In their study, Winfield and colleagues (2013) incorporated the reflective cycle developed by Gibbs (1988) to the r-card model used by Hughes et al. (2009) to create their own effective reflective card design. The six stages of reflective process established by Gibbs is as follows:

1. Description: what happened?
2. Feelings: what were your reactions and feelings?
3. Evaluation: what was good or bad about the experience?
4. Analysis: what sense can you make of the situation?
5. Conclusions: what can be concluded from the experiences and the analyses you have undertaken?
6. Personal action plan: what are you going to do differently in this type of situation next time?

Gibbs (1988) created these six stages to facilitate the start of the reflective process and increase the likelihood that it produces something valuable for the learner. In addition, the order of steps is necessary because it prevents learners from taking premature decisions to make changes without going through the entire reflective process. This sequence also helps practitioners who lived a powerful experience to analyse it thoroughly rather than remembering it emotionally only and never discussing its implications. Lastly, learners that do not follow the sequence by writing about their feelings in the part may impede the value of their reflections in the later steps.

The use of such a reflective process is consistent with many recommendations. For example, Miles (2011) suggested that individuals should make reflections a directed task by grouping reflections in specific categories such as technical, scientific, pedagogical, personal,

and interpersonal. To use Gibbs' (1988) six-stage cycle accomplishes that goal and organises the reflective process effectively (Knowles & Telfer, 2009; Whitehead et al., 2016). Some authors underlined that reflections must be contextualized and must include emotions in the process (Dixon, Lee, & Ghaye, 2013; Knowles & Telfer, 2009). Gallimore and colleagues (2014) highlighted important features of effective reflective practice that are similar: (a) defining important instructional problems specific to the context, (b) preparing and implementing detailed instructional plans, (c) utilizing evidence to drive reflections, and (d) persistent work towards detectable improvements.

Considering that r-cards have the potential to overcome the barrier of time and provide enough structure for effective reflection-on-action, the purpose of this study was to document the experiences of a high-performance Canadian football coach who used r-cards during one competitive season.

Method

The first author – Coach Frank – was a high-performance Canadian football coach who planned to use r-cards while coaching during the 2016 season. Therefore, we decided to conduct an intrinsic case study. Intrinsic case studies are useful when “the researcher wants better understanding of this particular case” and when “the case itself is of interest” (Stake, 2000, p. 437).

Participant

At the time of the study, the first author was a doctoral student interested in coach development research (e.g., Rodrigue, He, & Trudel, 2016). He was also an Assistant Coach (nicknamed Coach Frank) with a university football team, the highest level of amateur football in

Canada. Although this was his first year as a high-performance coach, he previously coached for three years at the developmental level in different coaching roles.

Data Collection

During a complete season (mid-August to the end of October), Coach Frank completed 52 r-cards; one after every practice ($n = 46$) and match ($n = 8$). At the end of each practice or match, the coach followed this procedure:

Coach Frank debriefed the session with his players for two to three minutes on the field. Then he walked back to the assistant coaches' office and immediately accessed his r-card booklet located in his private locker. He sat down and set a timer for three minutes and completed each section of the r-card. Ideally, it would end with the identification of one action that could lead to an improvement for the next session. He put back his r-card booklet and proceeded to the assistant head coach's office where he joined the other coaches to prepare the next course of action for that day.

Data Analysis

For this study, the authors conducted a conventional content analysis as it is effective for studies with aims that focus on describing a phenomenon while using open-ended questions (Hsieh & Shannon, 2005). The conventional content analysis was conducted using a seven-step process: (a) the researcher immersed himself in the data by reading the raw data numerous times; (b) r-cards were read section by section to capture key words and create initial codes; (c) the author then annotated the document to capture initial thoughts; (d) initial codes were organized into meaningful clusters specific to each section of the r-card model; (e) these clusters were then combined in section bound subcategories; (f) the author then used these subcategories to define

categories for each section; and finally (g) the researchers worked to identify relationships between different categories (Hsieh & Shannon, 2005).

Results and Discussion

The results and the discussion sections are combined to present and organize the data in the most practical and trustworthy manner for sport coaches and researchers. We present the findings through a first-person perspective for two main reasons. We wanted to present the findings in a manner relatable to coaches. We also believed this approach would be more authentic since the first author was the participating coach in this study.

The results have been divided into three sections to clearly delineate the outcomes of this case study. The first section describes the coach's process for developing and adapting r-cards to his coaching context. Second, we summarize the coach's use of r-cards. The last section details the coach's reflection on the benefits and challenges of using r-cards.

Development and Adaptation of the Reflective Cards

To begin with, I reviewed recent publications to explore the various styles of r-cards. The inspiration for my r-card model came from three main sources: (a) Hughes and colleagues (2009) who invited equine coaches to reflect using an R-Learning Record Sheet, (b) Winfield and colleagues (2013) who created Reflective Practice Sheets to support the development of three equine coaches, and (c) R-card examples from a presentation by Trudel and Gilbert (2014). I used the model presented by Winfield and colleagues (2013) as a preliminary model, which I then modified based on my coaching needs and preferences. I wanted a reflective process that would take less than three minutes. A short reflective process would insure my commitment. Finally, I carefully designed each section of my r-card (see Figure 1 and 2).

My r-card model was composed of three main sections split in eight fields: a *Performance* section with fields evaluating *Players Performance* and *Coaching Performance*, a *Reflection* section with fields related to *Feelings*, *Evaluation*, *Analysis*, and *Technical/Tactical* reflections, and a *Generation* section composed of a *Conclusion* field and an *Action Plan* field.

To get this final version, I first created the *Players Performance* field to monitor my players' progress and the influence of my coaching on their performance. In this field, I inserted four key performance factors that were *effort*, *execution*, *tackling*, and *pass defense*. I chose these factors through a combination of coaching experience, analyses of professional football, and coaching research.

Second, I listed coaching competencies used by a previous study in the *Coaching Performance* field to initiate the reflective process: *Judgement*, *Decision-Making*, *Communication*, *Observation*, and *Teamwork* (Hughes et al., 2009). However, I realized that *Decision-Making* was not directly relevant to my coaching role and therefore this was removed. Part-time assistant coaches in Canadian university football typically do not have authority to make tactical or strategic decisions. Although not often, in some instances assistant coaches are invited to make recommendations, but final decisions are always left to superiors.

Third, I decided, based on examples suggested by Trudel and Gilbert (2014), to use an evaluation scale ranging from 1 (mediocre) to 5 (excellent) to write my perceptions of the *Players* and *Coaching Performances*. By taking this approach, I viewed this as an efficient way to initiate the reflective process and deliberately orient it towards aspects that would be meaningful to me.

Fourth, I continued the creation of my r-card by adding six qualitative fields based on the work of Winfield and colleagues (2013). I found it essential to add a technical/tactical field

because my primary coaching mandate was to enhance the technical proficiency of my players and to ensure that they understood their tactical responsibilities. In my view, the *Feelings*, *Evaluation*, *Analysis*, and *Technical/Tactical* field created a *Reflection* section that would lead me to reflect on my coaching. The *Conclusion* and *Action Plan* fields formed a *Generation* section that would lead me to suggest concrete practical changes to my practice.

Finally, I presented my preliminary r-card model to the second author and we reviewed it together. My overall goal during this process was to confirm that my r-card model remained consistent with the principles of the three main sources (Hughes et al., 2009; Trudel & Gilbert, 2014; Winfield et al., 2013), and that it would be as effective as possible for my coaching purpose. My discussion with the second author resulted in needing to make minor modifications, which eventually led to the final model of r-cards used throughout this study.

Usage of the Reflective Cards by Coach Frank

Practice. R-cards were helpful post-practice to delve deeply into the significant events of that day's session. R-card #21 is an example of this as I initially identified overall player effort as a problem during the scrimmage, which was then used to explore explanations for possible causes in the *Analysis* field. This card shows that I identified multiple elements in my reflection. For example, I identified two possible explanations for the lack of effort coming from my players, two challenging technical and tactical aspects, and two possible solutions for these issues. Identifying potential weaknesses and recognizing effort level echo the findings of Koh and colleagues (2017). R-card #21 may have given me the ability to identify action points that are specific to initial problems in the *Generation* section. The following statements demonstrate that:

- Doing the consolidation stage with blockers for tackling

REFLECTIVE CARD # 21		Date: 2016/08/28					COACH FRANK				
University of Ottawa GEE GEE'S - Defensive Football Reflective Card											
PLAYERS PERFORMANCE					COACHING PERFORMANCE						
	Mediocre	Passable	Good	Very Good	Excellent		Mediocre	Passable	Good	Very Good	Excellent
EFFORT/ENERGY:	1	2	3	4	5	OBSERVATION:	1	2	3	4	5
EXECUTION:	1	2	3	4	5	COMMUNICATION:	1	2	3	4	5
TACKLING:	1	2	3	4	5	JUDGEMENT:	1	2	3	4	5
PASS DEF. %:	1	2	3	4	5	TEAMWORK:	1	2	3	4	5
Feelings:	<i>How did you feel about this session (practice)? What was the impact on the players?</i> I think the scrimmage was good practice but the players did not seem to fly to the ball.										
Evaluation	<i>How did the players (the team) perform during this session?</i> I think the players did a good job in terms of knowing their execution but they missed energy.										
Analysis:	<i>Why did the team get the results indicated in the PLAYER PERFORMANCE sections?</i> → maybe the players were not rested → maybe the players were overthinking										
Tactical Technical:	<i>What part of the players play has been challenged today? (Which technique(s)? Which tactic(s)?)</i> → I think runs to the weak side were tough → I think tackling in close quarters has to improve										
Conclusion	<i>What are the possible solutions for solving this problem? How can I help my players repeat this performance?</i> → doing the consolidation stage with blockers for tackling → emphasize sprinting to the ball in helmet tempo										
Should this session be repeated in the exact same way that it happened today?							YES		NO		
Action Plan	<i>What will you do to improve your coaching during your next session? Or what will you do to repeat it?</i> too many; give less repetitions to players, improve their stamina.										

Article 1 Figure 1. Reflective card #21

- Emphasizing sprinting to the ball in helmet tempo
- Give less repetitions to players
- Improve their stamina

In implementing these solutions, I identified action points such as running the next progression of a drill for a technique (e.g. tackling), focusing feedback on player effort, changing personnel management strategy, and/or training another aspect of player fitness. Overall, this card shows that I initially critiqued player performance to then identify four different solutions. Without this reflective process it is likely that I would have ignored some of the causes and/or solutions.

Game. The analyses of the eight r-cards completed after competitions show that I used this process to critique my in-competition coaching behaviours and to identify areas of improvement for the upcoming week of practice. For example, I mentioned the need to improve

the execution of a tactic and my observational skills in r-card #30.

REFLECTIVE CARD # 30		Date: 2016/09/10					COACH FRANK				
University of Ottawa GEE GEE'S - Defensive Football Reflective Card											
PLAYERS PERFORMANCE					COACHING PERFORMANCE						
	Mediocre	Passable	Good	Very Good	Excellent		Mediocre	Passable	Good	Very Good	Excellent
EFFORT/ENERGY:	1	2	3	4	5	OBSERVATION:	1	2	3	4	5
EXECUTION:	1	2	3	4	5	COMMUNICATION:	1	2	3	4	5
TACKLING:	1	2	3	4	5	JUDGEMENT:	1	2	3	4	5
PASS DEF. %:	1	2	3	4	5	TEAMWORK:	1	2	3	4	5
Feelings:	<i>How did you feel about this session (practice)? What was the impact on the players?</i> I felt that the game went very well as we beat the 5th team in the country.										
Evaluation	<i>How did the players (the team) perform during this session?</i> I think the players did great with their tackling and their execution. They came to play.										
Analysis:	<i>Why did the team get the results indicated in the PLAYER PERFORMANCE sections?</i> Players had an 86% tackling rate.										
Tactical Technical:	<i>What part of the players play has been challenged today? (Which technique(s)? Which tactic(s)?)</i> The alignment and +1 has been challenged										
Conclusion	<i>What are the possible solutions for solving this problem? How can I help my players repeat this performance?</i> → run more +1 in indys										
Should this session be repeated in the exact same way that it happened today?							YES		NO		
Action Plan	<i>What will you do to improve your coaching during your next session? Or what will you do to repeat it?</i> The game preparation was great but I should be more aware of the mistakes of assignment in real time.										

Article 1 Figure 2. Reflective card #30

This post-competition reflection shows that I identified player performance as excellent for tackling and good for execution. However, I assessed the players' tactical execution more positively in the *Analysis* field. I also contradicted myself when I evaluated my observation as good, whereas stressing the need to improve it in the action plan section. This reflection shows a tendency to point out challenging areas and later link them to potential solutions. For example:

- The alignments and +1 were challenged
- The game preparation was great but I should be more aware of the mistakes of assignments in real time

In the *Conclusion* field, I mentioned my intent to work on a specific tactic during individual development periods. I also noted the need to improve my in-game awareness of player

execution in the action plan section. Differences between *Coaching Performance* and *Action Plan* fields show a progression in my reflection with respect to my observational skills. This post-competition reflection helped me identify weaknesses even though the result first appeared positive. Perhaps these outcomes suggest that a quick reflection via r-card use can answer the need for deep reflections (Hall & Gray, 2016).

Summary. Overall results are now presented for the three sections of my r-card. First, I display a summary statement for each section. Following, I detail the general idea that emerged from the content analysis of each field. Quotes accompany these explanations to provide readers with a clear illustration of the content's meaning.

Performance section. The aim of the *Player Performance* field was to help me track players during each session as well as throughout the season. Generally, my assessment of player performance showed *execution* as the lowest rated key performance factor, whereas *effort*, *tackling*, and *pass defense* were consistently rated between three and four (see Table 1). For example, one time I initially considered *execution* as the lower scoring category of player performance. In later fields, I focused on the players' ability to react to a specific situation. "*It seemed like they had issues with counter flow runs*" (Card #49). This shows that I expanded my reflections from the initial process that took place in the player performance section when I made it more specific later on. The *Coaching Performance* field focused on the self-evaluation of my performance of the coaching competencies. Overall, I identified *teamwork* as the top performance area, whereas *observation* and *judgement* were most often rated as very good. *Communication* was inconsistently rated from *passable* to *excellent* (see Table 1).

This initial reflection often set the focus for the *Reflection* and *Generation* section. For instance, I could evaluate my communication as *passable* and then identify an action point

Article 1 Table 1

Cumulative frequency of the evaluation marks according to each performance factor

Field	Factor	Mediocre	Correct	Good	Very Good	Excellent
Players Performance	Effort/ Energy	1	8	16	23	4
	Execution	2	9	27	14	0
	Tackling	2	2	23	22	3
	Pass Defense	2	9	16	23	2
Coaching Performance	Observation	0	10	20	20	2
	Communication	1	10	14	20	7
	Judgement	1	4	24	22	1
	Teamwork	0	6	11	25	10

specific to that in the last section. *“I will try to communicate better with my LBs as what we expect”* (Card #10). This statement shows the completion of the cycle initiated in the *Coaching Performance* field since it ended with a hint to the need to improve my communication of expectations.

Reflection section. My reflections often began in the *Feelings* field with a general look at a training session and then transitioned to a description of the players’ condition for a given day, *“I felt good about the session, but I feel like the players could have played better and I felt that we were tired.”* Answers were occasionally random as shown by this example directed at technical and tactical components, *“I really [think] we are making strides in terms of tracking and tackling but we have to make improvements”* (Card #10). On other occasions, I went straight to a positive evaluation of the session, *“I felt good and I was in control the whole time. I was able to provide teachable moments to the players”* (Card #17). Overall, this section helped to unload my initial and superficial thoughts while opening the way for deeper and more

meaningful reflections. For example, I answered the following on r-card #5, *“I felt the practice was good, but the players should have been better at knowing their plays.”*

The goal of the *Evaluation* field was to judge the quality of the players’ performance or my own performance. I often used this section to critique specific performance areas as represented by this summary statement, *“I think the players played well versus the pass but had issues with finishing their assignments and were inconsistent at tackling.”* I also showed appreciation for good player performance several times in this section. This quote from card #44 shows an example of praise, *“The players did fairly well for a Tuesday practice even though they need to be more consistent in their block shedding.”* This highlights a general trend to have the second part of my statement target the players’ inability to finish plays or struggle with tackling. On card #49, I wrote: *“I think the players were sound in their assignments but that they have to get better at finishing plays.”* On card #45, I stated that *“The players did well in terms of execution, but they are still inconsistent on tackles.”*

Building on statements made in the previous field, I used the *Analysis* to hypothesize what might have been causing player under-performance. The analysis shows that searching for the causes of the struggles was a process full of uncertainties. *“I think we got those results because we might be overthinking, we might be too comfortable, we might do this wrong, or we might have inconsistent focus.”* Performing this analysis did not always lead to the identification of the root cause behind poor performances. *“Alignment was poor, and some tensions arose. A lot of players wanted to talk and know their roles”* (Card #25). At other times, this step seems to have raised questions. *“Maybe the players were not rested. Maybe the players were overthinking”* (Card #21). Overall, the statements in this section underlined my uncertainties while often remaining general to a point where I do not answer the reflective question.

The *Technical/Tactical* field frequently contained reflections on sport-specific components related to the statements made in *Evaluation* and *Analysis*. I often used Canadian football terms to point out the problematic area. The following summary statement expresses this: *“I think this specific technical aspect was challenged today: reading the passing concepts, the players’ mindset, or the tackling footwork.”* Sometimes, the statements covered a technique superficially. For example, I stated on card #12 that *“I think block destruction and playing the ball is a challenge right now.”* However, I pinpointed some technical or tactical issues on other cards. *“I feel knowing their spacing or drops were a challenge and also their ability to identify their tackling situation”* (Card #17). I mostly focused on the technical and tactical challenges faced by the players, which matches the original intent of adding this section to the original design.

Generation section. Three types of solutions emerged from the *Conclusion* field. First, I often focused on the selection of upcoming training activities or the modification of typical training activities. For instance, I suggested a tiny tweak to a regular drill on card #12. *“Insert more shield and forearm bags into the flow reads drills.”* Second, I often considered the option of modifying the meetings’ format or creating other resources for the players. The summative idea goes as follow: *“I could make them do this in the meeting or I could organize a video edit for them.”* Finally, reflections occasionally targeted the instructional component of my coaching performance. For instance, when I noticed in the early sections of r-card #21 that the players’ energy and effort levels were not up to par, I decided to change the emphasis of the feedback I would give to the players in the upcoming sessions.

The *Action Plan* field of the r-cards was designed to help me target one concrete action that I could perform in the next session. Often written as an assertive statement, the summative

idea goes as follows: *“I will make sure to interact better with the players and I should review my preparation and the instructions before the drills and periods.”* I often made an *“I will”* statement to identify the behaviour to start or change. For example, this statement was written on card #19: *“I will make sure I teach players about the proper fits and that I emphasize block destruction.”* I also made regular statements about the behaviours or elements that went well during that practice. *“The leadership group meetings are so valuable, it really helps the group be proactive”* (Card #37). Finally, answers in this section also identified instructional behaviours that could be adopted or changed. *“I should use more visual demonstrations or live feedback.”*

Reflections on the Use of Reflective Cards by the Coach

Once the competitive season ended, I completed a retrospective reflection on the benefits and challenges of using r-cards. It was challenging to use the r-cards at times because it felt redundant and unimportant when compared to other coaching tasks (Knowles et al., 2006; Rynne & Mallett, 2012), such as creating an edited video of the practice for meeting with the players. Nonetheless, it seems that my coaching practice has benefited from using r-cards on multiple fronts.

Adaptation. I felt that adapting the r-cards to my own practice and purpose was a highly motivating part of using reflective practice. This process is insightful because I learned about other coaches' improvement strategies and I improved my understanding of the rationale behind reflective practice. However, some coaches may find the adaptation tricky. The scientific resources were quite accessible to me, but it may not be the case for all coaches. Some coaches may also make modifications that will be detrimental to the reflective process. For example, they may remove the *Feelings* field because they underestimate the influence it has on their coaching performance.

The process of adapting the r-cards is important for a coach to integrate them into his practice. If the elaboration is not well done, it will feel like added work. For instance, the insertion of my own key performance factors and the addition of a technical/tactical section increased the likelihood of continuously using the tool as I noticed an impact on my daily coaching practice. It answers the call for contextualized reflection (Dixon et al., 2013). The tool also becomes personal, which may favour a more authentic reflective process.

Challenges. I did find it challenging to use the r-cards regularly. In fact, the data shows that there was a lack of coherence from one card to the next, and a lack of perceived value in completing the process at times. For instance, I wrote “*Forgot*” on card #13 and that I did not want to reflect on card #28. On occasions, my reflections were also vague and deficit-based. I wrote on card #46 that “*there was still some issues, the practice was ugly. It may be good but will see on the weekend*” in the *Analysis* field. Such a statement neither helps to find the root causes nor improves player performance. This reinforces perhaps the suggestion that reflective tools can be overwhelming and that having a person to act as a sounding board might be necessary (Gilbert & Trudel, 2013).

At times, I also experienced an internal conflict of wanting to jump ahead to the *Conclusion* and *Action Plan*. I thought that I already knew the causes of our struggles and had no need for the other sections. Nonetheless, I never answered to that urge and always stuck to the proposed sequence. After all, it directly meets one of the three reasons that justified the creation of this sequence by Gibbs (1988), so that practitioners do not skip essential part of the reflective process.

Benefits. The reflective process that was supported by the r-cards acted as a catalyst for change and improvement in my coaching practice. First, data shows that I reflected on my

teaching of technical skills and tactical concepts repeatedly. In the *Technical/Tactical* field, I often (a) recalled effective teaching strategies, (b) generated novel explanation strategies, or (c) critiqued strategies I used during that session. For instance, I began to use on-field tutorial video and implemented pre-drill walk-throughs from reflections written in that section. Second, the use of r-cards seemed to enhance my reactivity to player performance. Several excerpts monitor the players' energy levels, recognize the need to rest some players, and subsequently determine the best course of action. Third, the reflective process helped me make several sport-specific and precise observations. I consistently identified weaknesses, such as the inability to bring their feet under their tackles or to track the hips of opposing players. Fourth, the r-cards helped me identify and repeat effective coaching behaviours. I was able to associate some actions with an outcome and highlight positive events that happened in that day's session. Finally, many reflections discussed relationships and the climate within the coaching staff. For instance, I wrote this on Card #25: "*Indies are great but I need to be better at guiding the offensive coaches in scout (period).*" I seemed to have reflected on my interactions with the coaching staff frequently. This adds evidence to the argument that r-cards are beneficial for beginner coaches (Hughes et al., 2009). It also underlines the support provided by r-cards in the process of becoming a better coach. The little time required for this learning situation was key to insuring an effective use of reflective practice throughout the season. Researchers should examine the possibility of coaches combining the use of multiple reflective tools, since the length and space of r-cards may limit the depth of some reflections.

It is somewhat naïve to think that coaches will become effective reflective practitioners without instruction or facilitation (Miles, 2011). Coaches find reflective practice useful when they are taught how to use it (e.g., Roberts & Faull, 2013; Taylor et al., 2015), but coach

education programs still struggle to integrate reflective practice into their curriculum (Callary, Culver, Werthner, & Bales, 2014; Lefebvre, Evans, Turnnidge, Gainforth, & Côté, 2016; Milistetd, Trudel, Mesquita, & Nascimento, 2014). Coach education programs could integrate reflective practice strategies into their curriculum and start by teaching how to adapt these tools. This could increase the regular use of reflective practice since my occasional lack of motivation adds another example of a coach who struggled with the use of r-cards (Hughes et al., 2009; Winfield et al., 2013). Perhaps, researchers should explore further the need for reflective practice to be supported, facilitated, and periodically debriefed (Winfield et al., 2013). Roberts and Faull (2013) demonstrated that facilitated reflective practice could be mutually beneficial for a sports coach and a mental performance coach. Future studies should perhaps include a periodical debriefing with a reflective practice facilitator considering that some reflections were vague, and that motivation was lacking. Nonetheless, support could be detrimental as it could limit the coaches' originality in their reflections and produce reflections that adhere to the norm (Cushion, 2018).

Although this r-card model generated benefits for my coaching practice, I would modify it to improve its efficiency if I had to use r-cards again (see Figure 3). The *Performance* section would remain the same considering that I felt it was intrinsically related to my coaching purpose. Similar to designs from previous studies (Hughes et al., 2009; Winfield et al., 2013), I would insert a field designed to identify the focus of my reflection early in the reflective process. The analysis showed that there was a lack of coherence between the answers in the early and later fields. This would help to narrow down the scope of my reflection and increase the likelihood of deeper reflections. I would then refine and lighten the *Reflection* section by putting only the reflective questions without a heading. This would simplify the design and make the question the

focus. Finally, I would combine the last two sections since the analysis revealed that there were many duplications between the *Conclusion* and *Action Plan* field.

REFLECTIVE CARD #		Date: ____/____/____					COACH FRANK				
University of Ottawa Gee-Gees - Defensive Football Reflective Card											
PLAYERS PERFORMANCE						COACHING PERFORMANCE					
	Mediocre	Passable	Good	Very Good	Excellent		Mediocre	Passable	Good	Very Good	Excellent
EFFORT/ENERGY:	1	2	3	4	5	OBSERVATION:	1	2	3	4	5
EXECUTION:	1	2	3	4	5	COMMUNICATION:	1	2	3	4	5
TACKLING:	1	2	3	4	5	JUDGEMENT:	1	2	3	4	5
PASS DEF. %:	1	2	3	4	5	TEAMWORK:	1	2	3	4	5
<i>Which key performance indicator should be the focus today?</i>											
How did I feel?											
How did we perform?											
Why did we get those results?											
What has been challenged?											
<i>Should this session be repeated in the exact same way that it happened today?</i> YES or NO											
If it arose again, what will I do?											

Article 4 Figure 3. Adapter r-card model designed by the coach after the study

Conclusion

This study demonstrated that the use of r-cards adapted to my coaching context helped me to reflect effectively and consistently on my coaching in practices and competitions. My reflections also produced several benefits – (a) generating teaching strategies, (b) enhancing reactivity, (c) increasing personnel awareness, (d) recognizing effective behaviours, and (e) critiquing human interactions – and presented some challenges – (a) lack of motivation, and (b) superficial reflections.

To the best of our knowledge, this study contributes to the literature because it is the first to present the use of r-cards by a coach in the high-performance coaching context. Another contribution for practitioners is in the examples of their use in a practice and competition setting.

It also is the first to document the development and adaptation of r-cards by a coach to his preferences and needs. By contextualizing the tool and making it handy, it insures that the coach can reflect on his practice when he or she is mentally prone to reflect and/or emotionally charged. This characteristic seems conducive to recurrent use. Future studies should examine the process and the effectiveness of adapting reflective cards, and other reflective tools. The 46 post-practice reflections also showed that it helped the coach generate multiple solutions to various coaching problems.

Nonetheless, practitioners and researchers must be sensitive to the limitations of such a case study. This account only describes one coach's experience using r-cards. The findings come from a specific context (i.e. Canadian university sport, high-performance, graduate student conducting his dissertation). The coach was a graduate sports coaching student who had pre-existing knowledge of reflective practice. These characteristics may have enhanced the coach's ability to benefit from r-cards and increased his motivation to commit to reflective practice. Although this study described an in-depth use of r-cards, it underlines the need for future studies to continue the documentation of the implementation of reflective practice by high-performance coaches. The adaptation of the r-cards by the coach suggests that selecting and developing the tool is more important than finding the best tool (Kovacs & Corrie, 2017).

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Article Two

A “personal learning coach” for high-performance coaches : A companion to reflect and learn from one’s own coaching practice.

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Chapter Objectives

At the end of this chapter, readers should be able to:

1. understand the rationale for proposing a new actor, entitled ‘personal learning coach’, to support high-performance sport coaches in their lifelong learning journey.
2. outline the essential components of narrative-collaborative coaching, the approach that guides the conversation between a personal learning coach and a high-performance coach.
3. conceptualise the use of narrative-collaborative coaching in their own professional practice.

Brief Chapter Overview

In this chapter, we first argue that current coach education programs and other teaching initiatives somewhat prepare coaches to assume their role, however, they are not suited to help experienced high-performance (HP) coaches in their lifelong learning journey. Second, we introduce the personal learning coach (PLC) as a new actor to help HP coaches learn from their actual coaching practice. By using a narrative-collaborative coaching (NCC) approach, the PLC becomes a learning companion in the co-creation of knowledge for the coach’s coaching practice. Third, we present the procedure used by the first author to conduct NCC with five university team sport coaches. Finally, we conclude by sharing our reflections on the role of PLCs in sport.

Why and When to Use a Personal Learning Coach

In an attempt to foster the development of their coaches, national governing bodies and sport federations have developed coach education programs. The content of these programs varies in order to adapt to the specific needs of different coaching contexts. For coaches, who begin to coach at the high-performance level, some organizations might offer a more individualized program (Rodrigue, He, & Trudel, 2016). The process will usually start with a committee, composed of administrators and coach developers, conducting an audit meeting with an HP coach to identify gaps between the coach's perceived and actual competencies, and those of an 'ideal HP coach'. An individual learning plan is then charted to correct these weaknesses. The committee then assigns a coach developer or a mentor to supervise the implementation.

Over the years, we have acted – and continued acting – as coach educators, facilitators, mentors, and consultants for different sport organisations while researching coach development. While we recognise the positive impact of the coach education programs currently in place for incoming coaches, we observed that HP coaches are often isolated after certification. There is a piece missing in the sport system to support HP coaches in their lifelong learning journey. Our combined experiences enable us to suggest an initiative to optimize the development of HP coaches: 'Personal coaching for HP sport coaches'.

The Essentials of Narrative-Collaborative Coaching

Experienced coaches, who are adequately certified and still want to learn from their ongoing coaching practice, need a companion to participate in a reflective process that leads to the co-creation of knowledge useful for their current and emerging challenges – just-in-time – rather than someone to tell them what to do. We have named that learning companion a 'personal

learning coach'. What differentiates PLCs from other actors helping sport coaches in their development is that PLCs base their work on NCC principles. NCC is one of a broad spectrum of coaching approaches (e.g., career coaching, life coaching, executive coaching). For Stelter (2014), it stands out from the importance placed on narratives that people (HP coach and PLC in our case) share when exploring the world (HP sport coaching) together (collaborative). Stelter (2014) defines NCC as:

a developmental conversation and dialogue, a co-creative process between coach and coachee with the purpose of giving (especially) the coachee a space and an opportunity for immersing him/her in reflection on and new understanding of 1) his own experiences in the specific context and 2) his interactions, relations and negotiations with others in specific contexts and situations. This coaching conversation should enable new possible ways of acting in the contexts that are the topic of the conversation. (p. 8)

We present some of the essential components of NCC and link these to the high-performance sport coaching context.

The specific context – HP coaching is a complex profession, requiring the coach to continuously strive toward maintaining a competitive advantage. HP coaches experience loneliness and high levels of stress because of the constant pressure to win (e.g., Mallett & Lara-Bercial, 2016). HP coaches cannot be good enough, they are expected to go beyond the basic standards to meet HP expectations. In other words, they must innovate by exploring new ways of addressing recurrent and emerging challenges to regularly elevate their team's performance. This creative reflective

process can be stifled if HP coaches must follow a pre-determined curriculum designed by their peers and based on the coaching practice of an 'ideal coach'.

Safe learning space – HP coaches should feel safe to discuss their fears and aspirations, and to question their coaching philosophy and the sport culture that prevails in their sport federation. In this safe learning environment, learning should not be perceived as an addition to the coach's work. The freedom that HP coaches have to explore any aspects of their professional work and even personal life will be, for many of them, a new learning experience (Stelter, 2014).

Narrative – In NCC, narratives are essential because they link events and actions together and reveal an HP coach's interpretation of the way things unfolded. In other words, narratives are a representation of the meaning that an HP coach has given to recent events that occurred in his/her coaching practice. The PLC works around those narratives to help the HP coach reflect on his/her coaching practice by (a) suggesting other interpretations, (b) encouraging the exploration of alternate perspectives, (c) inviting the coach to re-author the story, and (d) identifying key moments.

Collaborative – If conducted adequately, NCC contributes to the co-creation of knowledge. As equals, the HP coach and the PLC bring their own expertise to the co-creative dialogue, and are equally competent in negotiating what it means to coach at HP levels. Therefore, each learning activity is viewed as a co-creative process instead of as a problem to solve.

Coaching – The HP coach and the PLC will have ongoing dialogues called ‘coaching conversations’. These coaching conversations may happen at any time, for varying durations, and through various mediums (e.g., face-to-face, phone calls, emails, web conferences). Other people will be invited to participate into the dialogues when the dyad feels the need to explore additional perspectives.

Considering these key components, PLCs are not playing the same role as traditional coach developers or mentors, who often work with coaches during their certification process. HP coaching is becoming more complex and the workload tends to increase along the overwhelming flow of information that globalisation and new technologies bring. Thus, HP coaches, like many other professionals, find it difficult to stop, step back, and find time to reflect on what is relevant, and dare to innovate. The role of PLCs is to accompany HP coaches in a reflective process about their actual coaching practice. We believe this fellow human companion (i.e., PLC) needs to be knowledgeable about three interconnected aspects: (a) sport coaching practice, to understand the HP coach’s context; (b) sport coaching science, to bring new perspectives into the dialogue; and (c) the NCC approach, to be a valuable learning companion and to be able to explain what they do.

A guide for the NCC – Stelter (2014) mentioned that NCC is not a coaching approach composed of a series of steps that must be strictly followed. Nonetheless, a guide can be used to set up a valuable and sustainable process. Appreciative inquiry can help do that because it reaches a healthy balance between the learners’ strengths and weaknesses. It also fosters an uplifting exploration of possibilities because it focuses on positive topics as the starting point. Although

strengths are the starting point, weaknesses will appear as the learners work towards their optimal self and realise the limiting factors of their performance. Hence, appreciative inquiry (Whitney & Trosten-Bloom, 2010) serves as the guiding structure for organising the NCC relationship in our approach (Milistetd et al., 2018; Stelter, 2014). The four phases of an appreciative inquiry are discovery, dream, design, and destiny. In the discovery phase, participants are invited to reflect on, understand, and appreciate their strengths. Then, in the dream phase, they imagine an optimal version of themselves through a series of questions that challenge their perspective. In the design phase, the participants target avenues to achieve their optimal version. Finally, the destiny phase is when the PLC and the HP coach participate in ongoing coaching conversations and take concrete actions to improve the HP coach's coaching practice.

Examples of Narrative-Collaborative Coaching with University Sport Coaches

This section provides a general description of a PLC's use of NCC with five university sport coaches. Table 1 presents an overview of the activities performed and the coaching topics discussed during each phase of these five coaches' personal learning journeys, which was supported by a PLC.

Article 2 Table 1

Activities performed and coaching topics discussed during each phase of the university coaches' learning journey

Phase	Activity	Gary	Jennifer	Eric	Francis	Brian
Discovery and Dream (inception)	Autobiography	Professional athlete Teaching education	National team athlete Personal relationships	University athlete Academic pathway	Coaching experiences Building a program	Multisport athlete Kinesiology education
	Video Self-Presentation	Drill organisation Communication	Assistant coaches Learning objectives	Drill success rate Time management	Challenge zone Feedback strategies	Drill instructions Learning objectives
Design (preparation)	List of Coaching Topics	Productivity	Technology	Leadership	Analytical skills	Leadership
		Personnel management	Mental preparation	Productivity	Leadership	Mental preparation
		Program management	Physical preparation	Recruiting	Technical preparation	Nutrition
		Communication	Program management	Technology	Productivity	Technology
		Teaching in practice	Nutrition	Periodization	Annual planning	Video analysis
Destiny (coaching conversation)	Session #1	Productivity Mentoring relationship	Program management	Tactical preparation NCCP certification	Technical preparation Pedagogy Reflective practice	Leadership theories Annual planning Reflective practice
	Session #2	Reflective practice Recruiting Program management	Mental preparation Reflective practice Coaching philosophy	Reflective practice	Tactical preparation Productivity Program management	Leadership system Reflective practice Productivity
	Session #3	Tactical preparation Recruiting Personnel management	Program management Reflective practice	Tactical preparation Reflective practice Leadership	Leadership Reflective practice	Reflective cards
	Session #4	Program management Annual planning Recruiting	Video analysis Player development	Reflective practice Game model	Team cohesion Recruiting	Team cohesion
	Session #5	Technical preparation Reflective practice	Mock interview	Tactical preparation Leadership		
	Session #6	Player development	Reflective practice			
	Session #7	Leadership system Game-day operations				

Phase 1 and 2: Discovery and Dream

The first two phases (discovery and dream) are grouped together for convenience and logistical reasons. The goal of these phases is for the PLC and the HP coach to develop a better understanding of the coach's biography and interests in ongoing learning. The first activity is an autobiographical exercise that invites HP coaches to examine their past and envision their future.

Autobiographical exercise

1. The PLC sends a document to the HP coach one week prior to the meeting. The document contains instructions for creating a hypothetical table of content of an autobiography describing the coach's journey to becoming the coach that he/she is today. In this exercise, coaches choose and summarise key events from their life that impacted their coaching career. Each event then becomes the topic of an independent chapter, about which coaches must write a meaningful title and a few lines describing that event.
2. The HP coach returns a completed version one day before the in-person meeting with the PLC.
3. The PLC and the HP coach meet to discuss the main story points of the autobiography.
4. Subsequently, they schedule a video self-presentation session (described next).

Table 1 indicates some of the main events of each autobiography. Most HP coaches discussed the impact of their athletic backgrounds on their coaching practice. They also emphasised their academic education's influence, regardless of their major's subject. Some of them completed majors directly relevant to coaching (kinesiology, teaching), while other had less relevant majors (science, law).

To complement the autobiography, the next step is to conduct a video self-presentation session led by the HP coach. Video self-presentation invites HP coaches to review their coaching practice and imagine how they could become an optimal coach. It also helps the PLC to support the HP coach because it enhances his understanding of the HP coach's practice, style, and challenges.

Video Self-Presentation

5. The PLC meets with the HP coach before the training session to discuss the session's plan and objectives.
6. During the training session, the PLC video records the HP coach in various coaching roles such as teaching techniques, introducing tactics, leading a physical drill, working on mental preparation, and giving out instructions.
7. The PLC and the HP coach meet immediately after the training session.
8. In that meeting, they review the video recordings. The PLC reviews the elements that the HP coach appreciates about his/her coaching practice and those he/she would like to improve.
9. The PLC and the HP coach then schedule the upcoming session.

The video self-presentation session highlighted varying aspects of the HP coaches' practice. The PLC led this activity by asking the coach about what he/she liked about his/her coaching practice, what the most prominent challenges were, and what he/she would like to improve. Table 1 presents the two most prominent aspects covered during these conversations. Although the centre of attention changed from coach to coach, the self-presentation focused on similar

coaching topics for these five HP coaches (learning objectives and drill delivery). Four of them expressed a desire to improve the effectiveness of their drills (organisation, explanations, or level of difficulty). Two believed that they employed effective communication strategies with their athletes. HP coaches also discussed other topics, such as their ability to achieve the learning objectives, their desire to involve their assistant coaches more effectively, and the challenges faced in optimising practice time. At the end of this phase, PLCs should have a reasonable awareness of the HP coach's practice and knowledge that will then help them find material, stories, and perspectives to use in the upcoming coaching conversations.

Phase 3: Design

The goal of the third phase is to build a preliminary list of prioritised coaching topics. These coaching topics will initiate the learning journey, with an understanding that they may change as the journey progresses.

List of Coaching Topics

10. Before the meeting, the HP coach is asked to create a preliminary list of five coaching topics to send to the PLC.
11. The PLC and the HP coach discuss the list.
 - a. First, the PLC invites the HP coach to present the five coaching topics.
 - b. Second, the PLC leads the discussion by asking for further explanations or by making suggestions based from the two earlier meetings.
 - c. Third, they agree on a list of the five most urgent coaching topics ranked based on priority.

- d. Fourth, they develop propositions together for each of those five topics. Propositions are inspiring statements that illustrate what the HP coach envisions as a target for each of those five topics.

12. The dyad selects the coaching topics to examine in the next three coaching conversations of the Destiny phase.

Each HP coach identified a unique set of five coaching topics that they wanted to work on and learn about (see Table 1). Certain themes were a recurring priority, such as leadership or productivity, although they were ranked differently within their respective lists. These five coaching topics were not all covered during the Destiny phase, as the HP coaches' practice made other coaching issues more urgent, or other topics became apparent through the flow of the coaching conversations. Such modifications are accepted in NCC. Our research and consulting experience has shown us that it is important to adapt the learning journey to the HP coach's just-in-time needs and challenges.

Although the personal learning journey must remain open to change and bound for an unknown destination, this first list of the HP coach's priority topics is important. In doing so, participants create an outline of their desired direction and learning content. This outline helps the HP coach to progress toward some positive and short-term change that will contribute to achieving the successful long-term implementation of NCC.

Phase 4: Destiny

In the final phase, the PLC and HP coach engage in a series of coaching conversations (see Table 1). For these HP coaches, it was agreed beforehand to have one 90-minute coaching conversation every month with their PLC. The frequency of these conversations was specific to each dyad as the occurrence, or lack thereof, was primarily driven by explicit requests from the HP coach and only occasionally facilitated by reminders from the PLC. Personal preferences and needs thus explain why Gary participated in seven coaching conversations and Brian participated in four, for instance. Between these face-to-face sessions, the coaching conversation continued as the PLC and the HP coach frequently exchanged emails and phone calls.

Typically, before the conversation starts, the PLC should review the notes from the previous conversation and send a reminder of the date, time, and topic of the upcoming conversation to the HP coach, as well as review any relevant material. To demonstrate the climate of this safe reflective space and their relationship, here is a fictional, but lifelike, coaching conversation between Francois (PLC) and Thomas (HP coach):

Thomas walks in the room and is greeted by Francois. A few minutes later, Francois gently asks, “How is your coaching going?”

Thomas: “Well, there is never a dull day in this profession. The athletes have been quite challenging lately.”

Francois: “Oh yeah, how so?”

Thomas: “Every time I demonstrate a new tactic, they ask question after question. It is almost as if they are trying to find holes! They even did that in the exit meetings last week.”

Francois: “I understand, it feels like they are challenging you. Could there be another explanation behind this questioning?”

Thomas: “I really feel like they are challenging me, but it could be that they are simply trying to understand.”

Francois: “Maybe. Do you want to discuss that issue today? We can also move on to the tactical progression of your yearly training plan as we had originally planned ...”

Thomas: “I would rather move on to annual planning. I have to deliver something to my high-performance director in two weeks.”

Francois moved the conversation forward by revising the exercise completed during the Design phase. He then probed Thomas by uttering the proposition created during that phase.

Thomas: “I still want to improve my annual planning. Even though we won it all three years ago, and still reached the national championship tournament the last two years, I feel like I could optimise our athletes’ collective performance even more.”

Francois: “What did you do that made your team perform well collectively over the last three years?”

Thomas: “I think there are a few things that made a difference. First, I always decrease the length of our practices five to six weeks before the end of the season. Three years ago, I also asked my players how comfortable and how confident they felt with the tactics

we had used so far. From there, we practiced four offensive tactics more often and it turned out to be very good for us.

Francois: “Interesting. In the past few years, you have decreased the workload and you have engaged in tactical conversations with your athletes. Did you still do that this year?”

Thomas: “I cut down practice time, but I haven’t talked tactics with my players this year. I don’t know why I stopped doing that.”

Francois: “Considering that, what needs to change to make things even better?”

Thomas: “I need to discuss tactics with my players again.”

Francois: “Okay. What else do you need to change?”

Thomas: “Hum, it’s hard to say. Sometimes it feels like I am missing some things. I probably need to be more systematic.”

Francois: “I remember working with a coach that had one sheet that charted the strengths and weaknesses of each of his tactics, do you have that? Did you ever take the time to chart these out explicitly?”

Thomas: “I don’t have that, but I know my tactics very well. If you want, I can talk to you about them for hours! But, ... I can’t say that I can point out to each of them in a succinct way if that’s what you mean.”

Francois: “That could be a good starting point, it would perhaps streamline your thinking process down the stretch.”

Thomas: “I guess so. If I address it in advance, I could have a clearer vision of my progression during the season. Also, I would probably make better decisions in the first games of the season.”

Francois: “Most likely, what else do you need to change to make things even better?”

Thomas: “Come to think of it, I cut down practice time two weeks before the playoffs every year. I should probably not be doing the same thing every year. Some years, players are more fit. Some years, they are more tired.”

Francois: “Indeed! To make these changes happen, what needs to be done and by whom?”

Thomas: “First and foremost, I need to choose a specific week when I will be meeting with my players to discuss tactics and strategies. In that same meeting, we could discuss our fitness level. I also think the strength and conditioning coach would need to conduct an evaluation workout a few days before that. My assistant coaches could also pass out a form to evaluate the athletes’ rate of perceived effort.”

Francois: “Okay, but let’s get more specific, what microcycle would that be?”

Thomas: “Hum... Conference playoffs begin in microcycle #44, I would feel comfortable doing that at least two weeks before the playoffs. Microcycle #41 would be perfect. I would have time to digest their feedback for the playoffs and I could potentially use it to make a game plan for our last two regular season weeks.”

Francois: “Great, I like that this is operational. So, how are you going to ensure that this happens?”

Thomas: “I will include it in my yearly training plan report by adding a section that describes our activities, that focuses on developing our tactical progression for the playoffs. I will call our strength and conditioning coach today to schedule a meeting and ask him to brainstorm until then. I will mandate my lead assistant coach to generate a survey.”

Francois brings the coaching conversation to its conclusion phase by summarising the discussion. He then sets the stage for the upcoming coaching conversation.

Francois: “We had planned to discuss your ability to manage your coaching staff during the next coaching conversation, does that still work?”

Thomas: “I would rather work on leadership. I feel the athletes don’t fully trust my abilities because we have lost in the national championship tournament two years in a row.”

Francois: “That works. I suggest that I call you next week to act as a sounding board for your planning and discuss how we will work on leadership moving on. Does that work?”

Thomas: “Yes, sir! That’s perfect.”

Francois and Thomas then conclude the session with the usual formalities and by scheduling the date of the next coaching conversation.

In this exchange, it is important to note several prompts that were used to guide the conversation: a) an open question at the beginning of the session to get the HP coach talking, b) checking with the HP coach to determine what topic he wanted to discuss (planned or unplanned), c) empathising with the coach by summarising his feelings and asking further questions, d) specifically asking questions that help guide the coach to come up with an action plan, and e) summarising that plan and determining the next meeting time. After the coaching conversation, it is important that the PLC finalises the notes of the coaching conversation and sends a summary email to the HP coach.

In the Destiny phase, each HP coach engaged in coaching conversations at different rhythms and for a different number of times over 12 months. This is to be expected considering that HP coaches should be drivers of their own development and the occurrence of coaching conversations relies on their initiative. Other events, such as job changes, phases of the season (in-season versus off-season), and personal life obligations, also lead to idiosyncratic participation. These variations may generate additional time constraints, which can result in coaches downgrading the priority they assign to learning. In sum, all HP coaches experienced unique and non-linear learning journeys, particularly due to changes in coaching topics and the frequency of coaching conversations from the pre-established priorities to meet the HP coaches' needs in a timely fashion.

Adjournment of the PLC-HP coach relationship

This companionship is evidently not eternal. It will end. The goal is not to have HP coaches dependent on the PLC. When the HP coach considers the companionship unnecessary, the PLC and the HP coach move on. At this juncture, the PLC and HP coach may perform a debriefing interview to review the value that was created during the partnership. We recommend using the Value Creation Framework created by Wenger, Trayner, and de Laat (2011). This framework has been used recently in studies on sport coaches' development (e.g., Bertram, Culver, & Gilbert, 2016). It examines five types of value created in learning relationships from the participant's perspective: (a) immediate — value of the experience, (b) potential — learning gained from the activities, (c) applied — ideas and methods generated for practice, (d) realised — impact on outcomes and goals, and (e) transformative — changes in beliefs and philosophies.

When coaches work to improve their coaching practice, it is important that they know the changes they have made so they are able to repeat or adjust those modifications. Most coaches we have worked with do not remember the learning activities they have participated in twelve months later even though they changed their coaching practice based on those activities. This examination may also motivate coaches to complete the learning cycle of these activities by intentionally working to create specific types of value (e.g., applied). Overall, our experience suggest that this examination should be done by reviewing the narrative of each learning activity and performing an interview to assess the value that was created, if any, for each of the types of value.

The end of the relationship might also be a good opportunity to deliver a summative report to the administration, with the HP coach's consent. This report should be limited to broad coaching topics and the number of interactions that took place during the partnership. It should not detail anything related to the coaching conversations or strengths and weaknesses, as this could compromise the safety of the learning space.

Personal Reflections and Wishful Thinking

We currently continue to employ this approach with 17 sport coaches who work at various levels: high school, junior college, university, and national.

First, it would be great if organizations would provide personal support or place graduate student PLCs onsite to work with their sport coaches whilst they are being supported by their professors.

Second, coach development administrators should start by initiating an introductory meeting to explain the principles and methods of this approach. Being aware of this learning opportunity, interested coaches could then express their interest to the PLC in a non-coercive way.

Third, we still debate the level of involvement of PLCs in sport. There are obvious constraints in terms of financial and human resources (funding priorities, competent PLCs). How should this role be funded? Who should perform this role? We think that post-graduate coaching programs and coach development researchers might be key in developing PLCs and helping further integrate them in the sport system.

Activities for Coach Developers

1. Familiarize yourself with the principles of narrative-collaborative coaching by reading Stelter's (2014) book and by reviewing scientific articles that describe its application in the high-performance context (Milistetd et al., 2018).
2. Offer some coaches in your network the opportunity to participate in a pilot project where they will be supported by a personal learning coach. In doing so, coach developers could practice employing narrative-collaborative coaching with other coaches while being supervised by an experienced personal learning coach.
3. Participate in a community of practice of personal coaches to share knowledge of personal coaching theories and on-the-job experiences to perhaps co-create knowledge and best practices for themselves.

Additional Resources

1. TED talk by Atul Gawande, MD, who discusses the role of coaching in medicine.

https://www.ted.com/talks/atul_gawande_want_to_get_great_at_something_get_a_coach?language=fr#t-64945

2. Institute of Coaching - MacLean Hospital and Harvard Medical School Affiliate: This organisation offers conferences and resources for coaches of professionals.

<https://instituteofcoaching.org/>

3. Reinhard Stelter's website offers a plethora of resources specific to narrative-collaborative coaching: <https://rstelter.dk/?lang=en>

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Article Three

Learning from Practice: The Value of a Personal Learning Coach for High-Performance Coaches.

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Abstract

Multiple actors and roles are now recognized and promoted to support the development of coaches. Personal coaching is an emerging industry in many professional fields yet remains insignificant in sport coaching. The purpose of this study was to document and assess the value of a 12-month action research in which a high-performance rugby coach, with the support of a personal learning coach, aimed to learn from her coaching practice. This action research was operationalized using an appreciative inquiry framework. Personal coaching was conducted according to the principles of narrative-collaborative coaching. Data collection included interviews, video observation, audio recordings of coaching conversations, notes from phone calls, and email exchanges. Results showed that this partnership created a safe and challenging learning space where different coaching topics were addressed, such as reflective practice, leadership, and mental preparation. A deductive analysis of the debriefing interview was completed using the value creation framework developed by Wenger and colleagues (2011). This analysis indicated that the high-performance coach's relationship with the personal learning coach enabled the development of five types of value: immediate, potential, applied, realised and reframing. Therefore, it is suggested that narrative-collaborative coaching can complement existing formal and non-formal learning activities.

Keywords: coach learning, reflective practice, narrative-collaborative coaching, women, rugby.

Introduction

Research on how sport coaches learn to coach have shown a variety of sources of knowledge acquisition (e.g., He et al., 2018; Mallett & Lara-Bercial, 2016) and different learning pathways (Werthner & Trudel, 2009), which has led researchers to suggest that learning to coach is a lifelong learning and developmental journey (Lara-Bercial & Mallett, 2016; Turner, Nelson & Potrac, 2012). Compared to established professions, sport coach development is a complex and intriguing process (Trudel, Culver, & Richard, 2016). This complexity is caused by a range of factors: the variety of roles and working conditions of coaches (volunteer, professional, part-time, full-time, etc.), variations between individual sports, and country specific differences (Duffy et al., 2011). In an attempt to map the roles played by different actors contributing to the coaches' learning journey, a table was created based on the literature (see Table 1). It should be clarified that only main trends are presented, and exceptions are both possible and inevitable. This is owing to the lack of agreement regarding the definition of terms, such as competencies, mentors, or 'personal coaching' (Collins, Burke, Martindale, & Cruickshank, 2015; Cox, Bachkirova, & Clutterbuck, 2010; Jones, Harris, & Miles, 2009), and the lack of knowledge about good and bad coaching practice in the performance context (Cushion, Armour, & Jones, 2006).

Interviews with coaches who discussed their biography indicate that learning how to coach starts long before their coaching career; the process is typically unconscious. For instance, life experiences as a child, such as being part of a family, allowed the development of key values that influence coaching approaches (Callary, Werthner, & Trudel, 2011; Duarte & Culver, 2014). Experiences in a sporting context, especially as an athlete, also contribute to the learning process. Within their first years of coaching, coaches often try to either model or avoid replicating the

behaviours of coaches they had experienced (Fraser-Thomas, Côté, & Deakin, 2005).

Article 3 Table 1

Activities performed and coaching topics discussed during each phase of the university coaches' learning journey

		Pre-coaching career		Coaching career	
		Child	Athlete	Early Years	Later Years
Unconscious Learning					
	Parents	Major			
	Sport Coaches		Major		
Directed Learning					
	Designers			Major	Minor
Coach Developers	Instructors & Facilitators			Major	Minor
	Evaluators			Major	
	Mentors (formal)			Major	
	Mentors (informal)			Major	
	Peers (network)			Minor	Minor
Coach of Coaches	Performance Coach				<i>To study</i>
	Developmental Coach				<i>To study</i>

The central role coaches play in the sport system is now widely recognised (ICCE, 2014). Accordingly, many different coach education programs (directed learning) are thus being developed (Callary, Culver, Werthner, & Bales, 2014). Recently, researchers have been studying those developing and delivering these pre-set training programs (Cushion & Nelson 2013; Horgan & Daly, 2015). The International Council for Coaching Excellence (ICCE, 2014), in a document entitled the *International Coach Developer Framework*, suggests using the term ‘coach developer’ as “an umbrella term to embrace the varied roles played by personnel engaged in the process of developing coaches” (p. 8). Coach developers are generally employees of national governing bodies, sport federations, or even clubs, that communicate the messages of

the organisation's coaching philosophy (Allison, 2016). Their training and the quality assurance of their work (Taylor & Groom, 2016) revolve around their ability to design and/or understand coach education programmes, to deliver courses and workshops, and to evaluate coaching performance (Abraham, 2016; ICCE, 2014). Generally, the obligation of coaches to attend and be certified takes place in the first years of a coaching position, in addition to occasional requests to participate in continuous professional development activities during their career (Armour, 2010). Directed learning activities, such as pre-set training programmes and continuous professional development activities, which are often delivered in classroom setting, have been received with scepticism by high-performance (HP) coaches (Clements & Morgan, 2015; Lara-Bercial & Mallett, 2016; Rynne & Mallett, 2012). The main complaint directed at these activities is that content is often irrelevant, because they do not represent the realities of coaching and do not address the coaches' needs (Armour, Griffiths, & De Lyon, 2016; Nelson & Cushion, 2006). To solve this issue, some initiatives have been established whereby coach developers deliver these programmes using a combination of formal courses and supervised field practices while assuming the role of mentor (Allison, Abraham, & Cale, 2016; Mesquita, Ribeiro, Santos, & Morgan, 2014).

Once certified, coaches have little pressure to continue their learning, apart from providing proof of development credits if required (Nash, Sproule, & Horton, 2017). Therefore, it is the responsibility of coaches to deliberately take actions to become a lifelong learner (self-driven learning). In their first years, coaches might seek an informal mentor who is willing to discuss their coaching practice (Mesquita et al., 2014; Young, 2013). Coaches also value their peers, but interactions between them are rare due to their competitiveness, even later in the career (Collins, Abraham, & Collins, 2012; Rynne & Mallett, 2012). According to Trede and

McEwen (2016), deliberate practitioners are continuous learners who question what they do, are curious of what others are doing, and “aspire to learning more than mastering measurable knowledge and skills; they also aspire to acquiring the means to support their need for perspective, value and meaning-making through a lifelong journey of learning and change” (p. 9).

Studies involving HP coaches suggest that everyday coaching experiences can provide meaningful learning experiences (Marshall, Nelson, Toner, & Potrac, 2014). Unfortunately, HP coaches often feel isolated, lack guidance, and have difficulty reflecting and sharing (Rynne & Mallett, 2012). Considering that HP coaching is evolving quickly with advances in technology, the entry of specialist disciplines, and more requests regarding leading and managing HP sport programs, finding methods to support HP coaches in learning from their practice is urgent (Mallett, Rynne, & Dickens, 2013). Although the importance of taking time to reflect on one’s own coaching practice is strongly promoted (Knowles, Borrie, & Telfer, 2005; Dixon, Lee, & Ghaye, 2012), few HP coaches make time to critically reflect on their practice (Cushion, 2018; Rynne & Mallett, 2014). One of the reasons might be that learning to reflect is rarely integrated into HP coach education programmes (Callary et al., 2014). Moon (2016) explained that “coach educators have not known how to facilitate the learning of such practices and in particular there has been little distinction between superficial description and the deep reflection from which good learning can emerge” (p. 66).

Recently, it has been suggested that offering a personal coach to sport coaches would help them to learn from their coaching practice (LEADERS, 2019; McCarthy & Brady, 2018; Trudel et al., 2016). According to Cox (2013), personal coaching can provide an environment for reflective learning, and “is best done by creating a psychological space that allows clients to

withdraw from the workplace in order to stand back and think, thus enabling them to gain some perspective on their experiences” (p. 73). There are many types of personal coaching approaches based on different theories (Cox et al., 2018). Researchers have suggested that it is important to distinguish between performance and developmental coaching (Jackson & Cox, 2018; Parsloe & Leedham, 2009; Silsbee, 2010). Performance coaching “is often informed by some form of gap analysis, 360-degree feedback, or another assessment of the competencies that the organization considers important” (Silsbee, 2010, p. 9) while in developmental coaching “the learning and development of the person being coach is the primary driver of the coaching” (p. 9). Because an individual’s agenda prevails over an organization’s agenda, although there will be some overlap, the developmental coaching process is based on a constructivist position, suggesting a movement from where the clients are now to where they want to be (Jackson & Cox, 2018). Thus, development emerges from working on the coachee’s current needs rather than from the result of an intervention designed by others that consists of teaching predetermined topics or procedures to fix attitudes or behaviours (Drake, 2015).

Narrative-collaborative coaching (NCC), a form of developmental coaching, has been popularised by three researchers: David Drake, Ho Law, and Reinhard Stelter (Drake, 2015; Drake & Stelter, 2014; Law, 2013; Stelter, 2014; Stelter & Law, 2010). According to Stelter (2014, p. 5), NCC is defined as follow:

Coaching is reflection between two people, and precisely because it is reflection, it involves both parties’ inner and outer life as well as the interaction that develops between them and their mutual reflections. Coaching is a meeting between two people, a coach and a coachee, which is continually aimed at creating optimal reflection between them. Both parties contribute to the reflection that develops every time they meet.

What differentiates an NCC approach from other forms of assistance is that the personal coach – referred to ‘personal learning coach’ (PLC) for the remainder of this paper – does not only support, they also participate in the learning process. The PLC is a ‘fellow human companion’ that “shares his considerations and reflections with the coachee in order to serve as a witness and co-creator in the dialogue. The coaching conversation can be described as a co-creative and collaborative process” (Stelter, 2014, p. 52). Similar to most types of personal coaching, the success of NCC depends of the readiness and capability of both partners to fulfil their respective roles. It means that HP coaches must have the desire to develop as a coach by being open to critically reflecting on their practice and to take appropriate actions.

For the PLCs, it can be argued that they must have knowledge and skills in three domains. First, they should to be familiar with sport coaching practice since HP coaches are suspicious of those suggesting how to coach without concrete experience (Watts & Cushion, 2017). Second, a PLC must be able to refer to sports science literature to introduce new ways of doing things into the conversation. Coaches and sport organisations are generally not well equipped to use sports science, even though it has become a key component within the HP context (Reade, Rodgers, & Hall, 2008). Third, PLCs must be able to demonstrate a proficiency of some core competencies of personal coaching, such as co-creating relationships and communicating effectively (ICF, 2019). Specific to developmental coaching, it is suggested to have a personal coach outside of the organisation, to facilitate clients’ developmental needs without compromise (Silsbee, 2010).

In summary, Table 1 presents the key people that sport coaches will encounter during their lifelong learning journey to help them to become ‘serial winning coaches’ (Lara-Bercial & Mallett, 2016). Whilst these learning opportunities can be easily recognised as cumulative, the

pathway will always be different because it is impossible to guarantee the same access to these helpers and the quality of support will vary. Support provided by parents and coaches have been described as both positive and negative (Côté, Baker, & Abernethy, 2003). The same can be said for coach developers in their different roles: instructor/facilitator (Nelson, Cushion, & Potrac, 2013), evaluator (Gillham, Hansen, & Brady, 2015), and mentor (Sawiuk, Taylor, & Groom, 2018). Studies on the support provided by personal coaches to HP coaches are lacking. The only publication which studied an NCC approach discussed a six-month learning journey of a tennis HP coach with his PLC (Milistetd, Peniza, Trudel, & Paquette, 2018).

Research Purpose

While the importance for sport coaches to reflect on their practice is clear, studies that examine its facilitation and report outcomes are lacking (Picknell, Cropley, Hanton, & Mellalieu, 2014). Therefore, the purpose of this study was to extend the work of Milistetd and colleagues (2018) by documenting and assessing the value of a 12-month NCC involving a female HP rugby coach and a PLC. Specifically, the following two questions were considered: (a) How did this learning journey form and evolve during a period of 12 months? (b) What value, if any, did this collaborative learning experience create for the HP coach?

Methodology

Research Design

The evolution of this study meets many of the principles of action research often used in sport coaching research (Rossi, Rynne, & Rabjohns, 2016). In action research, many decisions regarding the structure of the research emerge as opposed to being decided in advance. However, researchers can use some guidelines to organise a non-linear learning initiative. Appreciative inquiry (Whitney & Trosten-Bloom, 2010) can provide such general structure and is advised

when working in the field of coach development (McCarthy & Brady, 2018; Trudel, Gilbert & Rodrigue, 2016). Appreciative inquiry can also be integrated into NCC “because it is often much more helpful not to focus on the problems of the situation but on the possibilities and strengths of the participants involved” (Stelter & Law, 2010, p. 157). Although generally used with an organisation, the four phases of appreciative inquiry (discovery, dream, design, and destiny) can be modified to work with an individual (Milistetd et al., 2018).

In this study, the discovery and dream phases were completed simultaneously and form the inception of the collaborative learning experience. The former served to examine the HP coach’s past experiences and strengths, whilst the latter was a positive exploration of her future. In preparation for a narrative interview reviewing her biography and her coaching practice, the HP coach was asked to write a table of contents illustrating her autobiography. The title of each chapter had to be meaningful and refer to an event that helped her become who she is today. Narrative interviews are key in accessing the tacit knowledge of professionals (Perret, Berges, & Santoro, 2005). To complement the narrative interview, the HP coach was invited to discuss her coaching practice over eight video clips from one training session. Video recordings can facilitate such discussions as coaches tend to be inaccurate when recalling their actual coaching, when only relying on their memory (Mead, Spencer, & Kidman, 2016).

The design phase generated a list of coaching topics that the HP coach was interested in working on to improve her coaching. This list was created to generate uplifting propositions for her future and was prepared in advance by the HP coach after being discussed in a semi-structured interview.

Finally, the destiny phase was the safe and challenging space where the co-creation of knowledge materialised through coaching conversation sessions, emails, and phone calls.

Although all aspects of the list of coaching topics were considered, the learning journey was flexible, and priority was given to the HP coach's just-in-time needs. Beforehand, the HP coach and the PLC agreed to limit the coaching conversation sessions to one 90-minute session per month. Both felt that this commitment respected the HP coach's workload and optimised engagement.

Participants

In an NCC approach, the coachee and the personal coach are partners; therefore, information on both of these parties must be provided in this paper. The HP coach and the PLC have agreed to share their names.

Jennifer, the HP rugby coach

At the time of this project, Jennifer was a 42-year old rugby coach with over 20 years' coaching experience at high school, club, college, university, and national levels. She holds a Bachelor of Science degree with a major in Chemistry, and a Bachelor of Education with specialisations in Science and English. In terms of coaching education, Jennifer possesses a certification from the Coaching Association of Canada (CAC), and at the time of the study was involved in the Advanced Coaching Diploma (also offered by the CAC).

In 2013, Jennifer moved to her current position, where she works full-time as a head coach of a Canadian university women's rugby team. During her first five years with the programme, her team completed four undefeated regular seasons, winning the Conference title each year. Jennifer started to work with Rugby Canada in 2013 and is now an assistant coach with the National Senior Women's Team. Her goal is to reach the 2021 Women's Rugby World Cup.

François, the PLC

François' athletic and coaching career made him familiar with coaching practice. At the time of the study, he was 29-years old with 16 years of cumulative experience in Canadian football as both an athlete and coach. After his athletic career, he coached a junior college football team for three years whilst occupying various coaching roles with regional and high-school teams. He then worked as an assistant coach with a Canadian university football team.

François completed an undergraduate degree in human kinetics (sports science), and then co-founded an HP training centre, where he worked as a registered strength and conditioning coach training athletes of all levels. This experience fuelled a desire to complete a master's in sports management. Subsequently, he started a doctorate to examine HP coach development, during which he published papers on reflection and coach development (Rodrigue, He, & Trudel, 2015; Rodrigue & Trudel, 2018).

François also has experience as a coach developer. He is a trained coach developer (with the CAC), and has facilitated many workshops. He acts as a consultant for sport programmes and national sporting organisations. Specific to his role as a personal coach, François was supervised during this study by someone with the following key attributes: a personal coaching certification, experience of coaching HP coaches, and helping university professors in their career development. In conclusion, François qualified as a PLC because he has fundamental experience, knowledge, and skill, in three important domains: coaching practice, sport science, and coach development.

Data Collection and Analysis

Multiple methods of data collection were used in this study because different phases were incorporated into the methodology. Data were gathered from audio recordings of the narrative interview (n = 1), the semi-structured interviews (n = 2), and the coaching conversation sessions

(n = 6). To answer the first research question, a narrative analysis (Schutt, 2012) was completed to reconstruct the journey timeline (see Figure 1). Narrative analysis is useful for studies that examine a series of events rather than each event separately, especially when studies need to consider the participants' biographies (Riessman 2002). This was achieved by listening to these audio recordings several times, by reviewing notes taken during phone calls, notes taken during short unplanned meetings, email exchanges (n = 29), and documents developed by François (n = 5). All of these elements were then classified into stories within Jennifer's learning journey.

For the second research question, one debriefing interview was conducted at the end of the study. The interview guide was based on the value creation framework (Wenger, Trayner, & de Laat, 2011). This framework allows for the collection of data according to five types of value-creation cycles: (a) immediate value – direct experience of the activity, (b) potential value – learning from the activity, (c) applied value – learning put into practice, (d) realised value – outcomes reached from application, and (e) reframing value – transformation of beliefs. The value creation framework has been used in previous professional development studies (Cowan & Menchaca, 2014; Van Waes et al., 2016), including research in sport coaching (Bertram, Culver, & Gilbert, 2016; 2017). Prior to the debriefing interview, François provided to Jennifer a matrix that summarised the work completed in relation to the content of each coaching conversation session. The two-hour debriefing interview was recorded, and the transcription produced a 35-page transcript. Prior to analysis, the transcript was sent to Jennifer for member checking.

NVivo 12 software was used to organise and code the interview transcript (NVivo, 2018). Braun and Clarke's (2006) six-step process for deductive thematic analysis was completed as follow: (a) familiarisation with the data, (b) data were initially coded based on the five value-creation cycles, (c) the first author then searched for value creation stories, (d) both authors

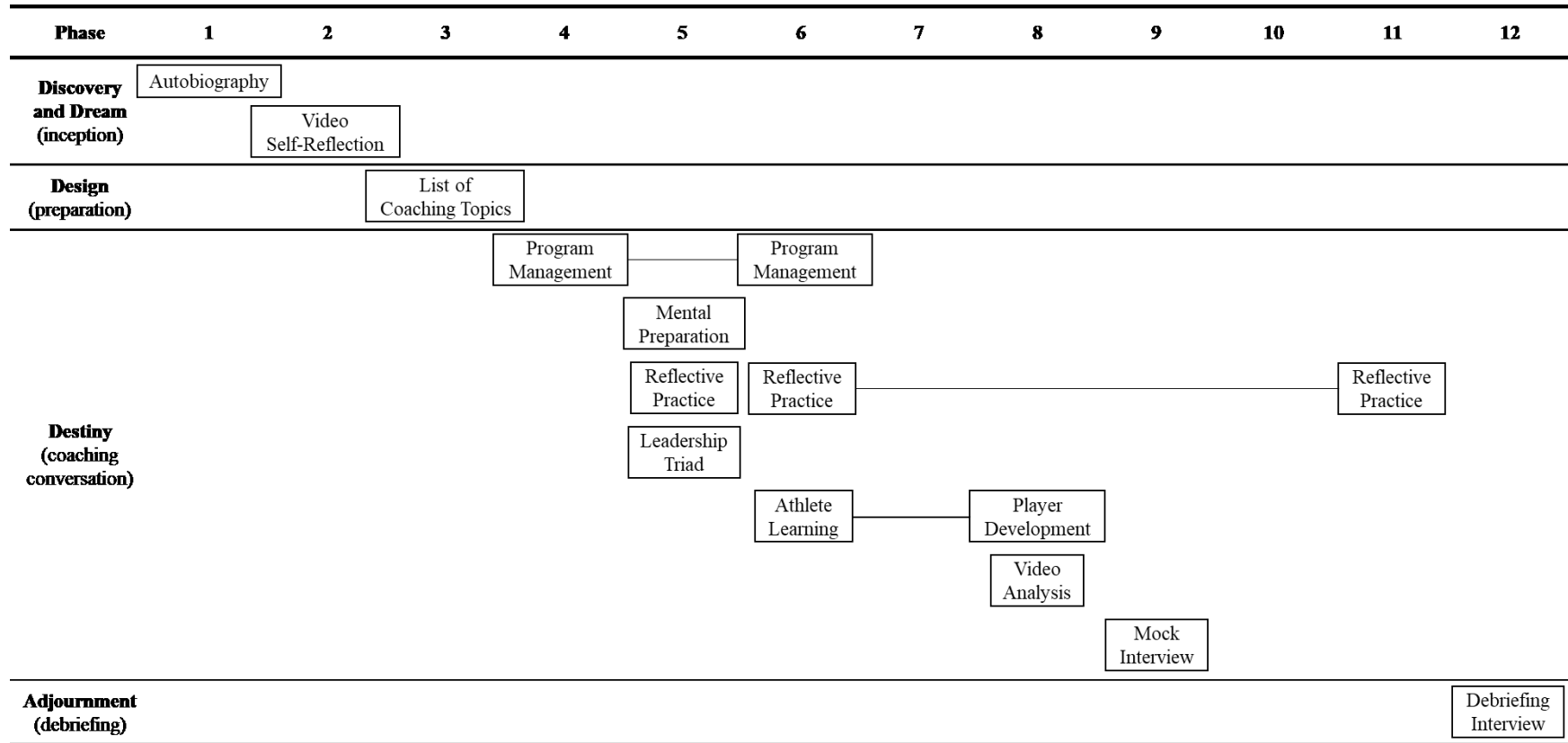
reviewed those value creation stories, (e) value creation stories were defined and named by both authors, and (f) the first author produced a report.

The research project was submitted to, and approved by, the Ethics Board of the university prior to conducting the research. Subsequently, with the collaboration of the HP sport director, a meeting was organised to introduce this non-mandatory coach development project to a group of full-time university sport coaches. Six of the 14 coaches attending the session agreed to participate. From that point, individual meetings were scheduled, informed consent was obtained, and the action research commenced. Out of the six coaches, Jennifer represented a unique case for a potential contribution to the coach development literature, because she was a successful full-time head coach of a women's HP team and there are few examples of female coaches in the literature (Harvey, Voelker, Cope, & Dieffenbach, 2018).

Results

Sequence of the 12-Month Narrative-Collaborative Coaching

Figure 1 presents a visual representation of the phases' content, which shaped Jennifer's learning journey with François. In the discovery and dream phases, two activities (autobiography report and discussion of video) helped to familiarise François with Jennifer's strengths and coaching philosophy. In the first activity, Jennifer prepared a table of contents composed of 11 chapters of her hypothetical autobiography. Each chapter had a title along with a few details and keywords. Jennifer listed the following key elements that contributed to making her a HP rugby coach: (a) playing for the National Senior Women's Team, (b) coaching and teaching at high-school level, and (c) acting as head coach of the Under-20 National Women's Team. The second activity involved François and Jennifer talking about her coaching practice while watching eight video clips recorded during one of her training sessions.



Article 3 Figure 1. Activities performed and coaching topics discussed during Jennifer’s 12-month learning journey

This dialogue revealed the following: (a) she trusts her assistant coaches to lead parts of the training session, (b) she is aware of her mannerism, and (c) she frequently adopts the role of a motivator.

In the design phase, Jennifer and François discussed six coaching topics that matched Jennifer’s priorities (see Table 2). This list allowed François to prepare, if needed, relevant material to nurture future coaching conversations.

Article 3 Table 2

List of prioritised coaching topics

	Coaching Topic	Sub-Topic
1	Technology	How to deliver film effectively?
2	Mental Preparation	Stress management of student-athletes.
3	Physical Preparation	Time and duration of warm-up exercises.
4	Program management	Integration of assistant coaches.
5	Nutrition	Post-game and pre-game in particular.

The destiny phase then regrouped six coaching conversation sessions. In Figure 1, the coaching topics discussed during the coaching conversations are named inside the boxes. The lines that connect the boxes indicate that this coaching topic was addressed between those sessions. It should be noted that the coaching topics do not exactly match the list produced in the design phase. The HP coach–PLC interactions prompted a reorganisation of the learning priorities to allow for topics to be covered ‘just-in-time’ for Jennifer’s professional responsibilities. For instance, program management, mental preparation, and video analysis were discussed; hence, these activities coordinated best with the spring season debriefing, the summer internship of master students, and the start of the regular season, respectively. Two urgent coaching topics were also added (reflective practice and mock interview) with mutual agreement. For example, the mock interview was added because Jennifer had to prepare for an upcoming job

interview. It should be noted that there were no coaching sessions in month #7, due to the summer holidays and a tournament, as well as month #10, because of the playoffs and the national championship tournament.

As mentioned previously, the coaching conversation sessions are moments for co-creation. The topic ‘reflective practice’ was selected as an example because it became a central learning element in Jennifer’s learning journey although it was not present in the list of coaching topics developed in the design phase. Familiar with the coaching literature, François noticed that Jennifer was rarely taking time to reflect critically on her coaching practice. François first investigated her knowledge of reflective practice and then presented some relevant material including an overview of reflective tools available. The following excerpt continues this coaching conversation, starting when they discussed the reflective tools:

François: *On the top of your head, right now, which reflective tool would you like to use?*

Jennifer: *Probably a journal. I could write after every session everywhere I go.*

François: *One thing that we can do is set it up now so that it’s ready to go in August.*

Jennifer: *Yeah, mid-June probably ... so I will have the summer to get ready.*

François: *I have an example from a coach. He writes dates on top of the books he used ... “August 2016”. Some others do it by topics. Is there one that you would prefer?*

Jennifer: *By dates. I have lots of books on the go, with topics like defence, attack, etc. I would rather do self-reflection on the athlete and how they reacted to certain things.*

François: *Writing is your preferred way of doing it ...*

Jennifer: *Yeah. For me, a journal, it’s easy. You can add diagrams. You can throw it in your bag. You don’t worry about a battery.*

François: *Written it is. I will comeback next time with a suggestion for a structure.*

In the next session, François and Jennifer critiqued her reflective journal entries. This process focussed primarily on comparing some excerpts with the four stages of critical reflection that François presented earlier.

François: *When we look at the four levels of reflection, where do you think yours are?*

Jennifer: *Probably three.*

François: *Why do you say three?*

Jennifer: *Because I am not just telling a story like this is what happened. I am conjuring emotions. As soon as I read that entry, I almost got emotional. I remember that day at the field, it was special. Anyway, I think I am at a level three, am I reflecting critically?*

Maybe, maybe not.

François: *So, what's a four again?*

Jennifer: *Critical is looking into the ways to improve or to better. Not just being content with how it is. Not because you are not good enough, it's just how can we be better today? Like I say to the girls all the time. I think that's what critical reflection is. You can solve problems if you think critically. That critical piece is pivotal.*

François: *Critical reflection is really about exploring multiple perspectives that can explain what went well or what went wrong so that you can improve. What you told me earlier is one explanation, what could be other explanations?*

Jennifer: *The emotions of the game, we were playing another Ottawa team. Like you want to be the best team in Ottawa. From what the athletes said after the game, it could have been because they had faith in me and the game plan.*

This dialogue, which builds on Jennifer's reflective practice, led to contemplating the implementation of reflective learning with her athletes. The intention was to improve the

athletes' development by enhancing the enactment of the leadership triad, which is a component of her coaching philosophy. Jennifer outlined her plan for inviting athletes to reflect on their performance every week.

Jennifer: The first pages are going to be about core values, the mission, the team's code so that their journals look the same. I want them to always have their journal. If we do some tactical stuff, they'll add it. Our mental performance coach will add to it as well.

François: Last time we talked about reflective practice, we raised those three questions. What did you do well today? What did one of your teammates do well today? What will you do better tomorrow?

Jennifer: Yeah, I forgot! That's what I did with my U20s.

François: Another key element will be how these strategies are integrated with your leadership group...

Jennifer: Every Monday at the end of practice, we have "connections" where they sit in their small teams, and chat. I think this might be a good time to [reflect]. I'll talk about this with the leadership group.

From here, Jennifer discussed the implementation of journaling (by the athletes) with the mental performance support team. Jennifer and François continually exchanged views on this topic, whether for guiding the athletes' reflective learning or enhancing her own self-reflection. It was agreed that the next coaching conversation session would focus on both Jennifer's and the athletes' use of journals.

Value Creation Stories of the 12-month Narrative-Collaborative Coaching

Table 3 presents data relevant to the value-creation cycles generated during Jennifer's learning journey. The table is adapted from Wenger and colleagues (2011) and relates to the

inception and coaching conversation. The table contains quotes from the debriefing interview that best summarised the value created.

The table indicates that the value creation framework was a powerful instrument to assess the values of this collaborative learning experience. For most of the inception and coaching conversation, Jennifer expressed the view that value was created for all five value-creation cycles. However, two activities in the discovery and dream phases (autobiography and video self-reflection) created minimal value, which was immediate for both, and potential for the autobiography. It is important to remember that these activities were primarily planned for the benefit of the PLC, to understand the coach's background, and to prepare the learning journey. Thus, the potential impact of these two activities, although minimal, has been underestimated. Jennifer perceived the autobiography positively and can now use the document for the certification she was completing. The video observation did not create much value, because Jennifer's past experiences had possibly familiarised her with her behaviours, as she had been observed many times as a teacher.

The coaching conversation in the destiny phase completed a cycle of value creation, from 'immediate' to 'reframing' value, for many coaching topics. Table 3 illustrates the value creation for each coaching topic, and some of these results require further explanation. First, the initial reflective practice coaching conversation (#3) scaffolded into a multi-level value creation story. This created value for Jennifer's 'cognitive housekeeping', helped to establish her coaching philosophy (#3a. Leadership triad), and materialised into athlete development activities (#3b. Athlete learning). Subsequently, she used the leadership triad as a rallying point in the national semi-final and for a presentation about her coaching. The reframing value shows that reflections on her coaching philosophy changed her perception of priorities that influence performance,

Article 3 Table 3

Jennifer’s perception of values created during this collaborative learning experience

	Immediate Value	Potential Value	Applied Value	Realised Value	Reframing Value
Inception					
1. Autobiography	It was a good exercise of self-reflection to reflect on my coaching career.	I now have it in my final presentation for my diploma. It paints a complete picture of my career.	N/A	N/A	N/A
2. Video Self-Reflection	It was interesting to be recorded coaching and to have clips of my own coaching.	N/A	N/A	N/A	N/A
Coaching Conversation					
1. Program Management	N/A	I now collect feedback from recruits. It is key – returning players know what to expect but rookies are very nervous.	I create clearer practice plans which I share prior to camp with coaches and the leadership group. They help me adjust.	Athletes and coaches are better prepared for our practices and games.	We will be better prepared mentally, physically, and emotionally to play the big teams this year.
2. Mental Preparation	I did not remember all the work I had done on that with François.	François and I defined roles for the support staff. The first years would work with the assistant and the 2nd to 5th year would work with the head.	That all happened! I applied it 100%. I had little experience working with a MPC, Francois helped me set up a structure.	It helped to achieve my goals in terms of helping my athletes in their psychological preparation on our way to win the National Championship.	It changed my view on the support that my athletes need in that department, support that I am unable to provide.
3. Reflective Practice	It was good and interesting, because Francois helped me come up with my reflective questions and an action plan.	That is where I identified my leadership philosophy: the leadership, culture, and relationship triad; It became Boyd's triad.	I sat down to reflect pretty much every week from May to the season. I also wrote down my philosophy for the first time ever.	It made me understand my athletes better and I was able to motivate them just right.	I realized the value of writing down what I do, so that I remember and document changes. I have to make the internal, external.

3a. Leadership Triad	N/A	N/A	I talked about the leadership triad in my university teaching, with the directors, and with my leadership group.	Understanding my philosophy helped me to motivate my athletes better in the semi-finals, which we won after trailing at half.	It helped me understand my strengths and what I can share with my athletes. It's not about the rugby, it's about everything else.
3b. Athlete Learning	The athletes loved the Monday connections where they brought out their journals.	I planned Monday Connections with input from the leadership group. Journals were expected at practices.	Every Monday, they sat in their groups for 15 minutes, share journal entries and discussed three questions.	I think the group got more heterogenous and that it strengthened our relationships. Girls would cry, and laugh.	I am going to buy more journals next year. I learned that providing athletes with time to reflect is beneficial.
4. Video Analysis	We wrote on the whiteboard all that I was going to do, and you then sent it to me.	I got the idea to reach out to other coaches and laid out a draft plan for video analysis.	I did the Google Drive thing. I met with the Volleyball coach.	For sure, I was better at video analysis this year, I felt more prepared.	To me, it reiterated the importance of video feedback. I do not do enough video.
5. Player Development	We talked about player development and evaluation criteria.	I learned about a different terminology to evaluate players.	I actually use the evaluation criteria with my U20s. I now have individual scorecards.	N/A	Players struggle to evaluate themselves, they need coach support.
6. Mock Interview	The mock interview was really good. It included unique questions.	I learned that I was not ready. I gained confidence in how to present my strengths and my philosophy.	I practiced and changed some things before the actual interview. After, I was interviewed by Rugby Canada and USA Rugby.	When it came to the interview, I was ready, even though I did not get the job. I had two other successful interviews.	It made me realize that I cannot be hesitant and that I have to have a plan for job interviews. Preparation is key.
Entire Journey					
1. Personal Learning Coach	Although it was weird to be coached, it was comfortable, and I liked the way Francois was holding me accountable.	During the project I gained insights on my capabilities and deficiencies. It opened my eyes to PD in places I had not considered before.	Francois made me take the time to develop. This was done in a way that I can remember what I have done. I also self-reflected and journaled more.	We win a gold medal for the first time, I do not think this was a coincidence.	It made me realize that I have to do more than diplomas. It happened so organically, that is what makes this approach great.

while reinforcing the importance of transparency. For ‘athlete learning’, the quotes indicate that Jennifer believed her reflective practice had improved her relationships with athletes. The athletes’ reflective practice also transformed her perspective on efficient athlete learning. In addition to the benefits of this value creation story, Jennifer reflected regularly on her coaching practice. She felt that reflection enhanced her motivational skills and increased the importance she attributed to documenting her coaching practice.

Second, the value creation analysis revealed the importance of the PLC listening to the HP coach’s urgent needs. Jennifer reported value for all cycles of coaching conversations that arose from current needs of her coaching practice (such as mental preparation and mock interview). For instance, the mock interview only appeared as a need late in this collaborative learning experience; however, it created value for all cycles. Furthermore, Table 3 indicates that some data are missing for some value creation cycles of coaching conversations (program management, leadership triad, and player development). The reasons for this might be that François and Jennifer did not expand sufficiently during the debriefing interview or that the Jennifer did not have any value to report. The generation of data showing realised value might be delayed, because the impact of potential and applied value for player development may only be meaningful in subsequent years.

Finally, Jennifer’s perceived values of the entire learning journey with François are presented in the bottom row (see Table 3). It is interesting to note that Jennifer believed she has learned how to learn and could more easily compare this non-linear learning approach with other coach education programmes: “Working with François made me realise how much more I have to do than just my Advanced Coaching Diploma. It happened so organically, that is what makes this approach great”.

Discussion

The purpose of this study was to document and assess the value of a 12-month NCC relationship between a HP rugby coach and a PLC. Considering the collaborative relationship that characterised this developmental coaching approach, it is appropriate to start this section by discussing how both partners have contributed. In line with the NCC approach, François was required to be a learning companion supporting and contributing to Jennifer's development by using knowledge and skills from three domains: sport coaching practice, sports science literature, and personal coaching. Therefore, the content of the interactions between François and Jennifer had to be different than usual discussions with her peers. This was apparent in the excerpt of the coaching conversation on reflective practice. Here, François (a) suggested addressing this topic after noticing its absence in Jennifer's routine, (b) checked Jennifer's familiarity with this concept, (c) provided information on what reflective practice entails, and on different reflective tools, (d) let Jennifer decide which tool she wanted to use, and (e) worked with her to apply the reflective journal to herself and her athletes. As stated by Parsloe and Leedham (2009), personal coaching is "a very specific type of conversation and not everyone, in [sport coaching] for instance, is used to having the patience and skills to help people learn in this way" (p. 9). The role that François played was also influenced by the fact that he was from outside the organisation; hence, he did not have any kind of imposed performance goals for the HP coach, and could accommodate Jennifer's just-in-time developmental needs. Considering that sport organisations tend to prioritise performance outcomes over career development (Dawson & Phillips, 2013), having access to a PLC can be a way for HP coaches to handle the pressure of their job (Lara-Bercial & Mallett, 2016; Rynne & Mallett, 2014), which is a factor that can impede the learning process (Silsbee, 2010).

Jennifer's strong desire to learn (and her commitment) helped foster a shared process of learning and development, which is typical of a productive NCC partnership (Stelter, 2014). It can be determined that Jennifer acted like a 'deliberate practitioner' (Trede & McEwen, 2016) for the following reasons: (a) she was open to reflection on her coaching practice, (b) she did not blindly accept François' suggestions, but engaged in the negotiation of meaning, (c) she honoured the agreement of meeting once a month, and initiated many exchanges between meetings, and (d) she saw her development as a lifelong learning process. The success of a personal coaching process depends strongly on achieving the right match between the HP coach and the PLC (Law, 2013), which appears to have been the case in this study. While François and Jennifer shared common interests, they each brought their own complementary expertise.

As demonstrated in a study from Brazil (Milistetd et al., 2018), structuring the 12-month learning journey with an appreciative inquiry approach was effective. The first three phases (discovery, dream, and design) allowed Jennifer to present who she was, determine her coaching approach, and decide on what aspects of her coaching she would like to improve. This approach of commencing an HP coach development initiative contrasts with the more common approach that consists of identifying the gap between a coach's competencies and an 'ideal' coach's competencies, and then selecting learning activities to address these identified weaknesses (Collins et al., 2015). Coachees will only be willing to share their challenges and take risks to innovate when they feel secure (Parsloe & Leedham, 2009). The last eight months of the journey were full of interactions between François and Jennifer for the co-creation of knowledge. Having monthly face-to-face meetings (for approximately 90 minutes each) was convenient, productive, and respected the recommendations made by established personal coaches (Parsloe & Leedham, 2009). The request from Jennifer, at the beginning of some coaching conversations, to change

the plan to address emerging challenges, confirms that HP coaching is a non-linear, complex activity that exists at the edge of chaos (Jones, Bailey, & Thompson, 2013).

Jennifer's learning journey was marked by her interest into learning about reflective practice and the use of a reflective journal. The former should not be a surprise, considering that the main goal of NCC is to create a safe space for the partners to reflect (Stelter, 2014), and that effective HP coaches use deep self-reflection (Lara-Bercial & Mallett, 2016). However, the latter contrasts with the literature, which suggests that coaches struggled to use a reflective journal (Koh, Mallett, Camiré, & Wang, 2015). In Jennifer's case, she selected the journal among other tools, after being introduced to the concept of reflective practice and, most importantly, she could rely on François as a partner in its application.

A debriefing interview was conducted at the end of the project. This interview echoed comments from Mallett and colleagues (2013) regarding the creation of impactful learning opportunities in the HP context, which fundamentally relies on the coaches' perception of the learning environment rather than simply the organisation of a prolific learning environment. The value creation framework developed by Wenger and colleagues (2011) was used to develop the interview and to analyse the transcript. As found in other studies (e.g., Bertram et al., 2017), this framework allowed the participants to discuss different types of values in depth. In this study, the results indicate that Jennifer was able to gain different value types: immediate, potential, applied, realised, and reframing (see Table 3). Contrary to most episodic learning activities – such as short courses and continuous developmental activities – that provide immediate and potential value, NCC has a strong impact on the coachee due to its longer-term partnership (Stelter, 2014).

As discussed so far, NCC has the potential to help HP coaches in their learning and development, but some challenges should be highlighted. First, because personal developmental

coaching is a new concept in sport coaching, researchers do not have many studies to refer to when designing a study or discussing their results. Accordingly, more case studies are needed. However, it will be difficult to establish best practice because of the unique profile of every HP coach and every PLC. Second, sport administrators might be sceptical of a coach development initiative that focuses more on development than performance (Silsbee, 2010). While NCC is presented as a journey into the unknown (Drake & Stelter, 2014) because it develops from the emerging challenges, stakeholders currently need and demand further evidence-based research and assessment of its effect (Law, 2013). For many sports organisations, a paradigm shift from the traditional learning approach (just-in-case) to a constructivist and learner-centred approach (just-in-time) is not an easy transition (Hussain, Trudel, Patrick, & Rossi, 2012; Paquette & Trudel, 2016). The third challenge relates to who can adequately fulfil the role of a PLC in an NCC. It was argued earlier that PLCs should possess knowledge and skills in three domains while there are no specific standards that PLCs must reach. Other supportive learning approaches can become fixated on their paradigm and impose a structured methodology, whereas NCC is based on principles that provide flexibility (Drake & Stelter, 2014). According to Stelter (2014), an efficient personal coach will be a lifelong learner with the ambition of being a reflective practitioner. The final challenge is that although the ultimate goal of personal coaching is for the HP coach to develop an independent capability to learn after the relationship has ended (Drake & Stelter, 2014), there is a risk of developing dependency (Brennan & Wildflower, 2018).

Conclusion

Coach development is a lifelong learning journey, which means that HP coaches will be involved in many different learning situations, and they will meet many individuals who will contribute to their development. Trying to identify which learning situation is more effective

than others has little value because each has its unique contribution and impact (Mallett, Trudel, Lyle, & Rynne, 2009). Thus, NCC should not be seen as a panacea, but rather as a new learning opportunity that HP coaches can freely choose to use when the ‘trial and error’ approach can no longer help their progression (Rynne & Mallett, 2012; Watts & Cushion, 2017). Having a PLC does not preclude HP coaches from engaging in discussions with their peers, consulting experts, or even attending formal courses. More importantly, the PLC is a learning companion, who can help HP coaches to take the time to reflect on their practice in a safe place whilst encouraging them to act.

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Article Four

**Coaching high-performance sport coaches: The 12-month learning journey of two
intercollegiate sport head coaches.**

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Abstract

In North America, intercollegiate sport is, in many cases, a stepping-stone in building a professional career for its actors. The quality of programs offered to athletes depends on many factors, including quality coaching. Effective university sport coaches have to help athletes reach athletic excellence while managing large-scale programs and supporting their athletes' holistic development. Recent research on coach learning has suggested that providing coaches access to a personal learning coach offers valuable support because it provides a safe environment to reflect and act on their actual coaching practice. The purpose of this study was to examine the evolution, and to assess the value creation of a 12-month learning journey of two intercollegiate head coaches who were supported by a personal learning coach. Results show that these two coaches' learning journeys had different learning activities and addressed diverse coaching topics. Collaborating with a personal learning also nurtured the creation of multiple types of values for both coaches' professional practice.

Keywords: Ice hockey; developmental coaching; university sport; narrative-collaborative coaching; intercollegiate; co-creation; coach learning; value creation framework.

Introduction

Intercollegiate sport in the United States of America (USA) and interuniversity sport in Canada, herein both called ‘intercollegiate sport’, occupy significant space in the social life of the population. For the athletes, coaches, and administrators of this context, intercollegiate sport is often a stepping-stone in building a professional career. Slack and Parent (2015), in a comparison of the structure and management of sport between the USA and Canada, mentioned : “Unlike many countries around the world, intercollegiate sport in North America, particularly the US, is a highly structured and commercialised activity. Student input is minimal and programmes are operated by paid professional staff” (p. 471).

Although sport funding primarily relies on private resources in the USA, intercollegiate sport has become a massive institution. The governing body of intercollegiate sport in the USA, the National Collegiate Athletic Association (NCAA), includes 1,117 colleges and universities, and more than 480,000 student-athletes (NCAA, 2019). Sport event attendance frequently reaches at least 10,000 people, with the average attendance reaching more than 42,000 people in football and almost 20,000 people for the National Championship Tournament in Men’s basketball (NCAA, 2019). The popularity of NCAA sport is undeniable. Notwithstanding, athletic administrators observe a persistent tension between funding for academics and athletics, which leads to questions concerning the current structure’s sustainability (Comeaux, 2015; Pine, 2010). Coaches are incentivised based on sport success, which then transfers to athletes who have to commit more than 40 hours per week to their athletic preparation (Wolverton, 2008). The first objective of coaches remains to achieve sport success within the constraints created by the context of sport within higher education (Eitzen, 2012).

In Canada, intercollegiate sport is primarily funded by federal and provincial governments. Its place in the nation's sporting psyche is much smaller than in the USA, although it remains important within the country's sport landscape. Canada has a population of 36 million inhabitants, which is roughly 11% of the USA's population. Canadian intercollegiate sport is composed of 56 universities and 12,000 student-athletes, all of whom are members of U SPORTS: the governing body of intercollegiate sport in Canada (USPORTS, 2019). Although U SPORTS has traditionally been similar to pure amateur athletics since athletes' funding and scholarships were limited to the sum of tuition and ancillary fees (Aughey, Danylchuk, & Lebel, 2011), recent decisions by U SPORTS favour a shift towards a high-performance (HP) model that puts greater emphasis on winning (Banwell & Kerr, 2016). Nonetheless, U SPORTS coaches consider it important to adopt a holistic coaching approach (Rathwell & Young, 2018), but recruiting remains one of their primary responsibilities to ensure their long-term success (Sinotte, Bloom, & Caron, 2015). U SPORTS is still primarily focused on the participants' experience, but coaches and athletes competing in men's football, hockey, and basketball experience a level of pressure similar to their American counterparts (Slack & Parent, 2015).

Any comparison between the American and Canadian intercollegiate sport contexts must be done carefully (White, McTeer, & Curtis, 2013), but there are some similarities between the two (Slack & Parent, 2015). First, intercollegiate sport in both countries should be considered HP sport because athletes have to commit time equivalent to a full-time job for their athletic preparation and compete for a national championship at the end of their season. Second, administrators and coaches have to manage programs that include helping their athletes reach both athletic and academic excellence. However, adopting a holistic athlete development approach is often a challenge (Duchesne, Bloom, & Sabiston, 2011; Rathwell & Young, 2018;

White et al., 2013). Third, coaches share a similar developmental pathway that includes a significant playing experience at a competitive level combined with at least an undergraduate degree (Erickson, Côté, & Fraser-Thomas, 2007; Pierce, Johnson, Krohn, & Judge, 2017; Rathwell, Bloom, & Loughhead, 2014; Tracy, Johnson, Giannoulakis, Blom, & Judge, 2018).

Researchers on both sides of the boarder have been interested in investigating the intercollegiate sport context (e.g., Banwell, & Kerr, 2016; Judge et al., 2018; Navarro, Haslerig, Bernhard, Houston, & Raphael, 2015), but there is a paucity of studies on the development of intercollegiate coaches and the few existing studies generally investigated the pathway of these coaches' career with a special attention to mentoring programs especially during the first years (Erickson et al., 2007; Mallett, Rynne, & Billett, 2016). Often viewed as a complement of formal coach education programs, mentoring initiatives are not without limits (e.g., Bloom, Lefebvre, & Smith, 2018). Formalized elite sport coaching mentoring programs “may be better conceptualized as a form of social control rather than being driven by pedagogical concerns” (Sawiuk, Taylor, & Groom, 2018, p. 619). Researchers also noticed that to increase the rate of success of their sport programs, administrators of intercollegiate athletics' departments often opt for recruiting high-profile coaches (Tsitsos & Nixon, 2012). However, the acquisition of a more experienced coach rarely leads to additional success (Tsitsos & Nixon, 2012). In most cases, it moves the program's success rate towards the mean, and it leads programs to one more win over three years in best cases (Pierce et al., 2017). If changing does not equate to more success, perhaps retaining coaches and supporting their development is a more efficient approach. For instance, Navarro and colleagues (2015) stressed that developing sport administrators from a multidimensional and holistic approach was paramount. This perhaps applies to coaches as well.

Coach development research suggests using, especially for HP coaches, a lifelong learning approach that extends beyond certification and integrates a coach's current coaching practice into the coach's learning and development (Hussain, Trudel, Patrick, & Rossi, 2012; Trudel, Culver, & Richard, 2016). More precisely, authors have recommended the addition of a *personal learning coach* (PLC) as a new actor that can be an effective learning companion for HP coaches (Milistetd, Peniza, Trudel, & Paquette, 2018). PLCs can help to co-create a safe and demanding learning environment for HP coaches to reflect and change their coaching practice when facing challenges. The need for HP coaches to reflect on their practice is not a new proposal (e.g., Irwin, Hanton, & Kerwin, 2004; Knowles, Borrie, & Telfer, 2005), but the gap between the academic rhetoric, the what and why, and the practical reality, the how, is real. Personal coaching could be an innovative addition to the intercollegiate sport context. Coaches value learning opportunities that stem from their daily coaching practice because they are highly accessible and directly relevant to their coaching, while also requiring less resources and minimal time constraints (Rynne & Mallett, 2012). That is to say, investing in the development of coaches in situ can be a complement and/or an alternative to traditional coach education programs. Although publications argue for supported and integrated coach learning, we know of no study that presents strategies other than education programs or mentoring, for supporting the development of HP coaches in the intercollegiate context.

Research Purpose

The purpose of this study was to examine the evolution, and to assess the value creation of a 12-month learning journey of two intercollegiate head coaches who were supported by a personal learning coach. The two research questions were: (a) How does the personal learning journey of two head coaches evolve when they are assisted by a PLC? and (b) What types of

value are co-created for a coach's practice when collaborating with a PLC? The two coach cases are part of a doctoral action research that offered access to a PLC to five HP coaches within the intercollegiate sport context. While some of the work of the first author's doctoral dissertation has been published elsewhere (Rodrigue & Trudel, in press; Rodrigue, Trudel, & Boyd, in press), this paper describes two unpublished case studies of coaches coaching the same sport (ice hockey).

Methodology

The authors conducted a action research, making this study flexible to meet the participants' needs and to align with key principles of the personal coaching approach (narrative-collaborative coaching; Stelter, 2014). This type of research is recognised as a strategy that is adequate for researchers who conduct a study that intends to impact the practice of professionals (Kemmis, 2009), such as in this HP coach learning study. Action research is powerful because it positions internal stakeholders (coaches) and external stakeholders (researchers) on the same level so that both can influence the evolution of the study (Glanz & Heimann, 2018). In addition, this collaborative effort makes two sets of resources and perspectives available to contextualize and work on issues.

Participants

To recruit participants, the authors used convenience sampling to select five coaches. Proximity was important considering that the authors planned to generate data in-person for 12-months. All five coaches worked in the intercollegiate sport context and resided in a large city in Canada. After the first author obtained ethical approval from the university, the athletic director of one university granted access to the institutions' full-time varsity coaches. This paper focusses on two coaches that practiced in a similar coaching context and had a similar coaching role. Both

were head coaches of ice hockey teams; a men's team and a women's team. They were assigned pseudonyms to maintain their anonymity.

Gary. Gary was in the middle of his first season as a full-time head coach of a university men's ice hockey team at the beginning of the study (January 2017). Gary earned this full-time coaching job after an on-going involvement in hockey that originated in his playing days. Gary had a stellar playing career where he received several accolades in his five years of junior hockey, five years of university hockey, and five years of professional hockey in Europe. He then coached for four years at various levels in Canada, such as under-18 and high-school hockey. Informed by an academic background in physical education, Gary coached his first university ice hockey game in October 2016.

Eric. Eric was half-way through his seventh season as a full-time head coach of a university women's ice hockey team when the study began. He had had a productive playing career for four years in junior hockey and five years in Canadian university hockey. After concluding his playing career at 26-years old and earning two bachelor's degrees (i.e., education, psychology), Eric started to coach a high-school sport-study program for many years. In that role, he had to coach the team and lead the players' strength and conditioning. He then launched a junior college program while coaching senior women's hockey. Eric officially became head coach of his current team in 2010.

Frank. Frank acted as the PLC for these two coaches. At the time of the study, he was completing his doctorate on HP coach development and working to publish scientific articles at the time of the study (Trudel, Gilbert, & Rodrigue, 2016; Rodrigue & Trudel, 2018, Rodrigue, Trudel, & Boyd, in press). After graduating from a bachelor's degree in human kinetics (kinesiology), Frank coached for four years: three years with a junior college football team and

one year with an intercollegiate football team. He then became more involved in the field of coach development and teaching. Since completing his undergraduate degree, he has also facilitated many workshops for the Coaching Association of Canada and taught five university courses. In sum, Frank has the knowledge and skills to be qualified as a PLC because he has the experience and education in coaching, sport sciences, and coach development (Milistetd et al., 2018).

Data generation

This action research lasted from January to December 2017. University ice hockey seasons traditionally begin in October and conclude mid-February, with conference and national championships taking place in late February and March respectively. Therefore, the two coaches benefited from the support of a PLC to complete the 2016-2017 season, and then to prepare and start the 2017-2018 season.

There are four phases comprising the data generation that led to the results presented in this article: (a) inception, (b) preparation, (c) coaching conversation sessions, and (d) debriefing. The first phase, inception, comprised two activities: a narrative interview, and a video self-presentation. The narrative interview invited the coaches to describe the main events that composed their developmental pathway to become the coach that they are today (i.e, an outline of their potential autobiography). Next, the PLC video recorded one training session for each coach. The coaches were then invited to present their coaching practice and their image of themselves starting with the content of eight video clips selected by the PLC from the recorded training session (video self-presentation).

The second phase, preparation, is a single activity that culminates with the creation of a list of coaching topics. The PLC asked each coach to create a list of five coaching topics on

which they would like to learn and to send it before the next meeting. The PLC and the coach then debated the level of priority of each topic to then formulate an initial list of five to address during the journey.

In the third phase, the PLC led narrative-collaborative coaching conversation sessions. The procedure for these sessions followed that described in two previous coaching publications detailing the use of narrative-collaborative coaching for personal coaching (Milistetd et al., 2018; Rodrigue & Trudel, in press). In short, narrative-collaborative coaching was applied to sport as it is a general coaching approach that invites personal coaches to provide a safe reflective space for developing coachees by listening generously, providing alternative storylines, challenging narratives, and inputting insightful information (Stelter, 2014). The coaching conversations took place at a rate preferred by the coach. Gary participated in seven coaching conversation sessions that lasted an average of 100 minutes whereas Eric participated in five coaching conversation sessions that lasted 84 minutes on average. Those conversations were audio recorded. The format of the sessions followed a consistent routine. At the end of each session, the PLC and the head coach mutually chose coaching topics to discuss in the next session. The PLC then shared before or brought to the next session material relevant to this coaching topic. Thus, the coaching conversation progressed using this combined knowledge: the head coach's perspective, the PLC's perspective, and the relevant material. Each such session concluded with the PLC inquiring how the coach could implement this actualized understanding of the coaching topic in his coaching practice. The data also included a copy of meeting notes, coaching documents produced, and learning activities conducted with the coach.

The fourth phase involved the PLC conducting a semi-structured, debriefing interview with the coaches to debrief their participation in 12-months of personal coaching using the Value

Creation Framework (VCF; Wenger, Trayner, & de Laat, 2011). The VCF is useful for collecting data on social learning strategies, as shown in previous sport coaching research (e.g., Bertram, Culver, & Gilbert, 2016; 2017; Rodrigue, Trudel, & Boyd, in press). To improve participant recall, the PLC sent a matrix (see Appendix G) to the coach that briefly described each coaching topic covered during the partnership with the PLC. The debriefing interview was audio recorded, transcribed, and sent to the participants for member checking. Gary's interview lasted 102 minutes and produced a double-spaced transcript of 40 pages, while Eric's interview lasted 112 minutes and produced a double-spaced transcript of 53 pages.

Data analysis

The first author created a database in NVivo 12 (QSR International, 2018) qualitative data analysis software. For the first research question (How does the personal learning journey of two head coaches evolve when they are assisted by a PLC?) the coaches' learning journey timeline was reconstructed using narrative analysis (Schutt, 2012). Narrative analysis is valuable when isolated events cannot explain the studied phenomenon because it needs to consider a series of events and their interactions (Riessman, 2002). To complete the narrative analysis, the authors listened to all the audio recordings several times, reviewed email exchanges, read the notes taken during and after interactions, and looked at the documents created. Tables and figures were produced to illustrate the narrative revealed through the analysis (see Table 1, Figures 1 and 2).

For the second research question (What types of value are co-created for a coach's practice when collaborating with a PLC for 12 months?) the transcripts of Gary's and Eric's debriefing interviews were independently coded using Braun, Clarke, and Weate's (2016) procedure for conducting a deductive thematic analysis: (a) familiarisation with the data by

reading the transcripts several times, (b) initial coding based on the VCF's five types of values, (c) searching for value creation stories across each participant's case, (d) discussing and reviewing those value creation stories among the authors, (e) naming these value creation stories according to the learning activities conducted with each coach, and (f) producing a report.

A value creation story is a narrative starting with a learning activity that generates multiple and interwoven cycles of value creation, from immediate value to transformative value (Wenger et al., 2011). Deductive codes were generated based on the cycles of value creation described in the VCF (Wenger et al., 2011). This framework proposes five cycles of value that might result from social learning activities: (a) immediate value, being the direct benefits of the activity, (b) potential value, being the new knowledge and resources gained from the activity, (c) applied value, represented by the concrete changes made to the professional practice, (d) realised value, being the performance and result improvements, and (e) transformative value, entailing a change in beliefs and philosophy.

Results

The main findings are two fold: (a) the two coaches learned about distinct and diverse coaching topics within a similarly structured learning journey, (b) the collaboration co-created five cycles of value in an intertwined value creation story for each coach's practice. In this section, we present the results of each coach sequentially (see Table 1).

Gary: Head Coach of a Men's Intercollegiate Ice Hockey Team

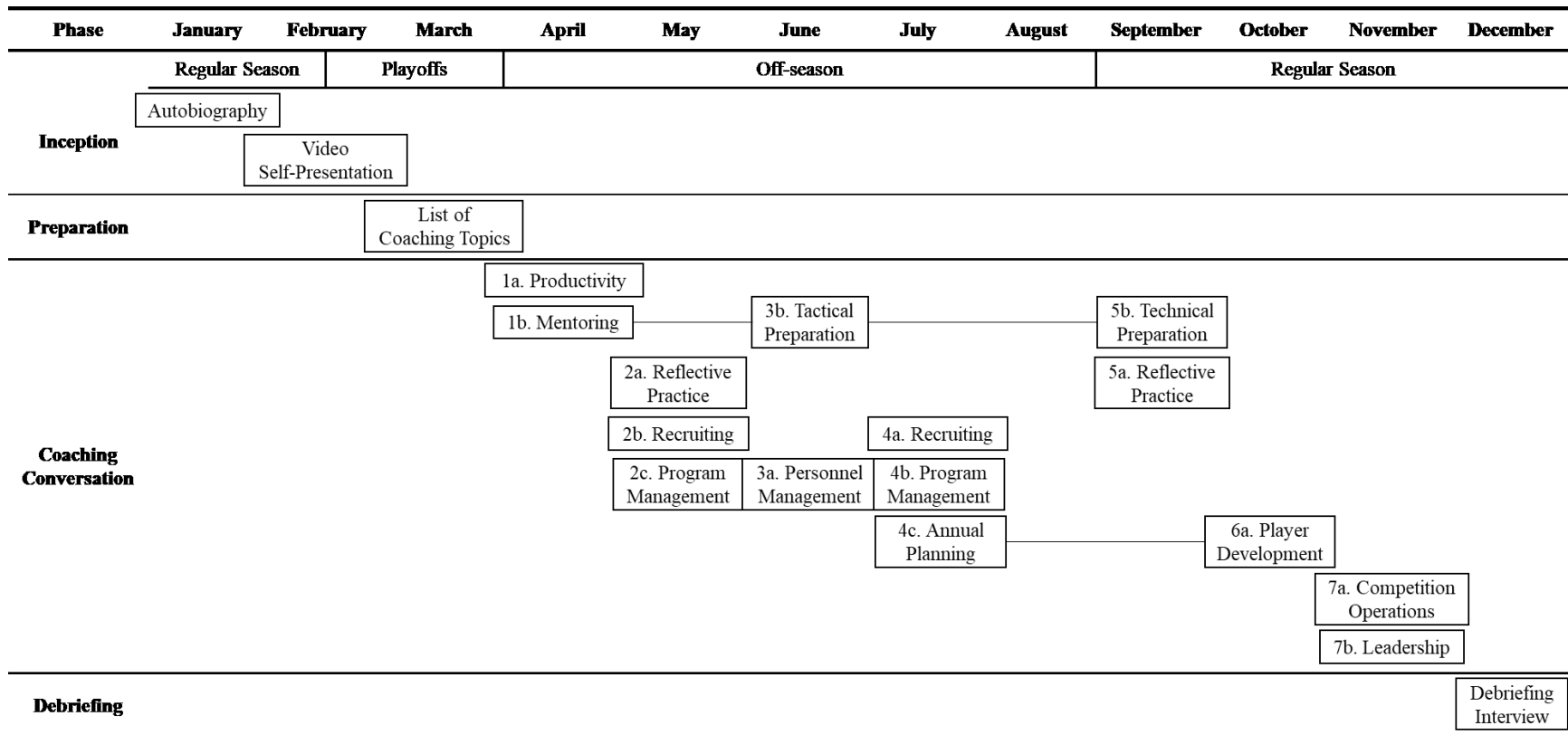
The learning journey. In January 2017, Gary attended the meeting introducing the research and voiced to Frank a strong desire to be part of this new coach development initiative. Together, their will to collaborate led them to schedule the autobiography exercise shortly thereafter, the first of a series of activities that formed Gary's learning journey (see Figure 1).

Article 4 Table 1

Content covered during each activity of the participants’ learning journey

	Gary	Eric
Autobiography	Professional athlete Physical education degree Varied coaching experience (118 minutes)	Intercollegiate sport athlete Two undergraduate degrees Women’s hockey experience (93 minutes)
Video self-presentation (8 video clips)	<u>Strengths</u> Positive reinforcement Teamwork with staff <u>Areas to improve</u> Drill organisation Communication (92 minutes)	<u>Strengths</u> Process oriented Technical knowledge <u>Areas to improve</u> Drill success rate Time management (80 minutes)
List of coaching topics	1. Productivity 2. Personnel management 3. Program management 4. Communication 5. Teaching in practice (73 minutes)	1. Leadership 2. Productivity 3. Recruiting 4. Technology 5. Periodization (37 minutes)
Coaching conversation	Seven sessions – see Figure 1 (11.6 hours)	Five sessions – see Figure 2 (7.0 hours)
Documents produced	1. Mentoring agenda 2. Reflective journal guide 3. Player meeting template 4. Give and go drill progression 5. Team meeting agenda 6. Post-mentoring action plan 7. PD program	1. Final concept map 2. Weekly and yearly calendar for meeting players 3. Game model draft
Debriefing interview	Value creation framework (102 minutes)	Value creation framework (112 minutes)

The narrative interview conducted with regards to Gary’s autobiography revealed that his experience as a professional athlete, a physical education teacher, and a coach in various contexts contributed to his current coaching style (see Table 1). Gary continued to show genuine trust



————— Participants discussed the coaching topics between sessions

Article 4 Figure 1. Data generation phases, activities, and coaching topics discussed during Gary’s 12-month learning journey

toward the PLC as he shared private details of experiences (e.g., how he dealt with players as a captain in junior hockey). Two days after, Frank recorded eight video clips of Gary coaching during a training session. These clips were then discussed within the video self-presentation. This revealed two main strengths: Gary often reinforces athletes' positive behaviours and he delegates several tasks to his assistant coaches allowing him to focus further on tactics. Nonetheless, Gary voiced a will to improve drill organisation for optimal athlete engagement and to enhance the clarity of his message when transmitting sport-specific information to the players. The PLC concluded by inviting him to reflect on these strengths and areas to improve.

A few weeks later, they met to identify the coaching topics that could be subsequently addressed. Feeling overworked, Gary ranked productivity at the top followed by four other coaching topics that were negotiated with the PLC: personnel management (assistant coaches), program management (from fundraising to planning), communication (clarity of messages), and teaching during practice (drill organisation). The last two areas were identified as needing improvement in the video self-presentation. Afterwards, Frank, based on the content of their discussions thus far, shared that mentoring seemed to have been influential in Gary's lifelong learning pathway. Gary acknowledged this and the dyad mutually agreed to prioritize mentoring and productivity in the first coaching conversation session. These three activities, the autobiography, video self-presentation, and list of coaching topics, set the foundation of the coaching conversation sessions to come (see Figure 1).

Before the first coaching conversation session, Frank shared a podcast episode about productivity and sought relevant material on mentoring. Starting with the topic of productivity, they pondered how to create moments of uninterrupted work for Gary to focus on planning, for instance. This conversation did not gain much traction, and Frank suggested moving to the next

topic: mentoring. Gary wanted to use mentoring, especially to improve his team's power play. Frank supported the coordination of a mentoring relationship in two ways: (a) he provided a model procedure for establishing a productive mentoring relationship (Gilbert, 2016) and (b) he challenged Gary to articulate the benefits he wanted to gain from the mentoring experience. They then discussed hockey coaches who could be good candidates to be mentors. The session concluded with them agreeing to focus on recruiting next time. Frank also suggested discussing the influence of reflective practice on coach development. This suggestion was based on Frank's understanding of the literature on HP coaches' development (e.g., Roberts & Faull, 2013; Vallée & Bloom, 2016). In the meantime, Gary used his network to connect with a mentor.

During the second coaching conversation session, Frank presented the concept of reflective practice along with a few reflective tools. Gary picked the reflective journal as a reflective tool. Frank helped him to create a model reflective journal entry to use in the upcoming weeks (Watton, Colling, & Moon, 2001). The conversation then shifted to recruiting. Frank asked Gary to outline the current recruiting process with attention given to strategies that have worked in the past. This task brought Gary to acknowledge the inferior structure of his recruiting program. Frank then suggested to Gary to meet with former players of other institutions to compare recruiting strategies and program structure. From this, the dyad began a conversation regarding program management, which covered revenue strategies and collaboration with other sports teams.

For the third session, Gary brought back material and notes about tactical preparation that he acquired when meeting with his mentor. Frank invited him to explain the material as if he was speaking to his players. This created a basis to address implementation, teaching progressions, and coaching points for enhancing the team's tactical preparation. Such conversations continued

through the summer as Frank and Gary shared ideas about player personnel use and teaching drills over many phone calls in the subsequent weeks. This eventually led to technical preparation becoming the focus of another session (see the line connecting tactical preparation and technical preparation in Figure 1). The conversation then moved to personnel management because Gary hired a full-time assistant-coach and was uncertain how to maximize the assistant's time.

Further discussions brought out recruiting, program management, and annual planning for the fourth session. Recent talks with former NCAA athletes allowed him to compare recruiting practices and conditions. These interactions also revealed that NCAA hockey programs had more practices, more rigorous training regimens, and lighter pre-season schedules. Frank then asked him to convert that into the Canadian intercollegiate context and to share his knowledge of annual planning principles. After the session, Frank shared planning documents from hockey federations and a talent identification scale used by a professional organisation with Gary. They eventually critiqued the current pre-season schedule during interactions that took place in-between the fourth and sixth session. This critique evolved into a conversation on player development that brought Gary and Frank to prioritize this topic for the sixth session.

After a lapse during training camp (August), the fifth session started by reviewing Gary's use of reflective practice. Gary completed only two reflective journal entries and stated he did not enjoy journaling, adding he had not gained value from it. Frank accepted this and guided the conversation to technical preparation. Gary asked Frank how he could enhance the technical preparation of the athletes to execute the new tactical strategy developed during the mentoring and the third session. Frank answered by reviewing the stages of skill development (Coaching Association of Canada, 2013) and possibilities of drill progression (Martens, 2012). They then

jointly created a series of drills to use in the upcoming training sessions. Gary asked if it was possible for his full-time assistant coach to join the last two coaching conversation sessions. He considered that his assistant coach could benefit from the conversations.

Based on the interactions that took place before the sixth session, Frank assigned a pre-meeting task to Gary that consisted of generating his own version of an ideal six-month player development plan. As Gary requested, Frank then contacted the assistant-coach to invite him to the meeting and to brief him on the pre-meeting task. Frank also completed the pre-meeting task. He considered this pre-meeting task essential since both coaches already had a player development plan in place and thought improving this area could be a generative way to start. The trio then negotiated and created together a 12-month plan that they could use with their team. Near the end of the session, Gary raised questions about their competition operations and asked if Frank could come to observe one of their competitions. More specifically, Gary requested that Frank observe a pre-competition meeting with the players, and their bench operations during the game. The assistant-coach requested that Frank observe his communication with the players during the game. Frank thus observed the coaching staff during a competition.

In the seventh session, Frank shared his observations of the competition operations with the coaches. More specifically, he commented on the monopoly of the communications by the coaches and that the other team's coaches were not as vocal during timeouts. Frank asked coaches to consider if this was what they wanted, or if they wanted to change this particular behaviour. The coaches preferred the status quo as their behaviours seemed to have been conducive to positive outcomes during that competition. The coaching conversation then shifted to the topic of leadership as requested by Gary. Frank presented leadership examples from the

literature (Gavazzi, 2015; Vallée & Bloom, 2016). The trio then discussed these leadership publications and how they could be applied to the coaches' context.

Overall, the genuine connection between Gary and Frank set the climate for the formal and informal interactions that shifted among related coaching topics. It is worth mentioning that Gary and Frank were in constant communication as demonstrated by the 70 emails and several phones call exchanged throughout the 12-month journey.

The creation of value. Table 2 shows excerpts of the debriefing interview that display the value that Gary perceived to have been created while being accompanied by Frank. Given the limited space available, this table contains excerpts limited to the entire learning journey, and mentoring. This choice is based on the fact that mentoring was and is an important source of knowledge for Gary and marked the coaching conversation from sessions 1 to 5 (mentoring, tactical preparation, technical preparation).

In summary of Gary's assessment of this learning journey, we can say that he appreciated the companionship provided by Frank. They developed a rapport that set the foundation for a safe place to reflect on Gary's in situ coaching practice (immediate value). Gary recognised the value of the tools and new information presented to him by Frank, especially in light of his lack of time to search for such things (potential value). The co-creation process helped Gary to take action, such as meeting the NCAA players, using checklists for meetings, and a log for each player (applied value). Through this 12-month learning journey, Gary gained more confidence (realised value) and now is more aware of his weaknesses (transformative value).

Specific to mentoring, Gary appreciated the friendly, relaxed learning atmosphere created by his mentor (immediate value). They discussed new strategies and Gary took notes (potential value). Gary incorporated a new tactical strategy (applied value) and his team's power play

Article 4 Table 2

Gary's perception of values created during this collaborative learning experience

	Immediate Value	Potential Value	Applied Value	Realised Value	Transformative Value
Entire Learning Journey	For sure, this project was positive. I think you [Frank] were excellent at being flexible and to adapt to what I needed. I could tell you that it was not going well with the club, and then we would work on leadership or annual planning. I think it was really cool because it was almost like "What's important now?".	I think that what is important is the fact that you brought us tools. At some point, you asked about what I wanted to work on next time, and then you arrived with a bunch of info and this had a lot of value for me because I don't necessarily have the time to search and analyse all of that.	I met with two former NCAA players to compare our program. We also keep a log of when we meet our players. We use the checklist that we built from your plan, so we have more structured meetings with the players now.	For me, it's clear that I improved a lot of things and it happened within the framework that you had for us. I gained a bit of confidence by working with you because I am better equipped than I was. It also helped me gain confidence by learning that I was not too far out in left field.	I think you help me focus more precisely on some stuff, I think I know my weaknesses more than I did back then. It opened my eyes to things that I don't think I would have found by myself. I would not have taken the time to reflect on that.
Coaching Conversation					
1b. Mentoring	It was different, and it was cool. The meeting with my mentor happened at his place, the setting was cozy, no pressure, no other coaches who asked questions.	I don't remember the template agenda, but I know I decided everything beforehand. We spoke about principles, a new strategy that I can use. We covered more topics than I thought. I then scanned my notes.	I sent my game plan in advance to the mentor. It contained questions that you [Frank] and I had discussed. My team still use my mentor's system today on the Power Play, whether it's Spread or 1-3-1.	I think the fact that you pushed me towards mentoring and that I then had this meeting on power play with a mentor had a great impact. We are still Top 3 in this category at the moment. Last year, we were terrible. As of today, my team only scored on our Spread Power Play, we keep possession, we are threatening, especially with our number #1 unit, we are always dangerous compared to last year.	Now, I know that if I want to improve something, that to reach out to someone is a really good avenue for me. I think I will gain more than going to a clinic where I attend one-hour lectures and there are few exchanges.

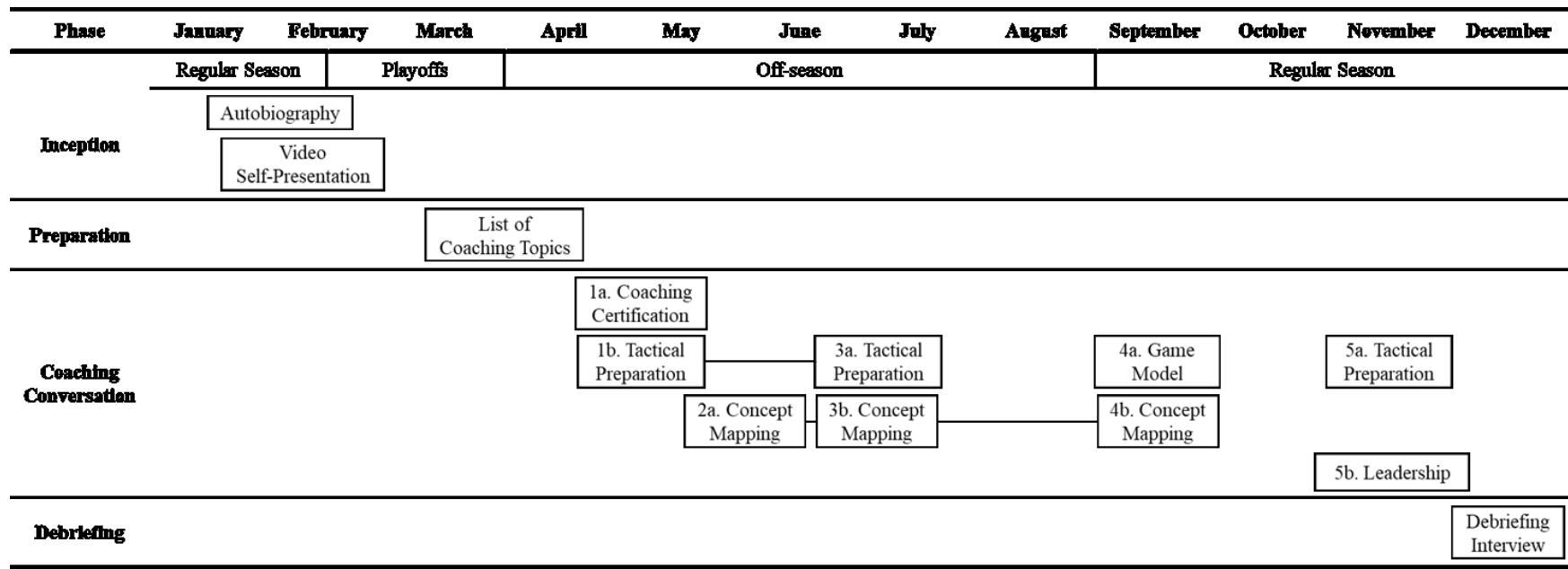
became among the best in the league (realised value). Going forward, Gary says he will favour reaching out to experts over clinics to learn about a specific coaching topic (transformative value).

Eric: Head Coach of a Women’s Intercollegiate Ice Hockey Team

The learning journey. Experienced coach Eric initiated the relationship with Frank by asking questions about commitment and confidentiality regarding this action research. Although he was apprehensive about this new coach development initiative at the beginning, his level of confidence and perceived value grew steadily throughout the journey. It evolved in such a way that Eric prioritized deepening his understanding of a few topics over five sessions (see Figure 2).

During the autobiography activity (see Table 1), Eric revealed that his stellar intercollegiate playing career was influential in his development as a coach because it nurtured his love of giving back. A sentiment that grew as he lived successes coaching women’s hockey at various levels (i.e., junior college, senior) and as he pursued higher education. Eric also underlined that he valued the perspectives of others and self-reflection. He recalled having learned substantially from reflecting on previous experiences and hinted wanting to systematise his reflective process. The video self-presentation highlighted the importance that focussing on the coaching process held for Eric, while displaying confidence in his technical knowledge. He nonetheless voiced having issues with the creation of drills matching the athletes’ skill level. Eric also felt overwhelmed trying to manage his time amongst all his responsibilities.

After the conclusion of the playoffs (end of March), Frank and Eric met to create a list of coaching topics to address during the upcoming learning journey. The dyad mutually agreed to focus on leadership (team cohesion), productivity (work organisation), recruiting (sales



————— Participants discussed the coaching topics between sessions

Article 4 Figure 2. Data generation phases, activities, and coaching topics discussed during Eric’s 12-month learning journey

effectiveness), technology (video software), and periodisation (annual planning); in that order. Productivity was identified as an area of improvement during the video self-presentation while all other topics were not discussed in the inception phase. Although these five topics were important, Eric stressed the urgency of finishing his HP coaching certification. Eric and Frank thus mutually agreed to make this the priority for the first coaching conversation session considering the looming deadline.

The discussions were focussed on Eric's completion of the HP certification during the first session. Eric voiced frustrations regarding the clarity of the assignment's instructions that required him to breakdown the team's system of play using video clips. To help him clarify this, Frank asked Eric to explain his system of play while illustrating it on whiteboards. Frank then compared the team's system of play with the terminology used in the assignment's instructions. The dyad concluded the exercise by outlining a procedure for extracting video clips efficiently. Frank and Eric eventually shifted the conversation to tactical preparation as Eric realised the need to clarify his conceptualisation of the system of play to be a more effective teacher.

Prior to the second session, Frank reviewed his notes and realised that Eric seemed to have a lot of tacit knowledge. This realisation, combined with Eric's show of appreciation for reflection in the inception phase, motivated Frank to introduce Eric to different reflective practice tools. Eric chose concept mapping as a reflective tool because it creates a visual representation. Frank thus presented a software tool (CmapTools; IMHC, 2019) and the process for creating concepts maps to Eric (Rodrigue, He, & Trudel, 2015). Eric expressed orally the concepts central to his system of play while Frank concurrently developed a first draft of a tactical concept map. Realising the complexity of his system of play, Eric concluded by stressing

the need to develop a plan for teaching tactics and techniques. Eric and Frank then worked together on furthering his conceptualisation of tactical preparation.

To support the work on tactical preparation and the concept mapping that was planned to continue in the third session, Frank shared with Eric periodisation and planning documents from several federations before the session (Hockey Canada, 2011; IIHF, 2008). Frank began the session by presenting three unique drafts of potential tactical concept maps to Eric; drafts that were created between the second and third sessions. They then collaboratively created an enhanced version of the system of play from the map Eric selected. Frank and Eric continued to exchange versions of the concept map and to share documents by email after this session; interactions which extended into the regular season (see line connecting 2a, 3b, and 4b in Figure 2).

In preparation for the fourth session, Frank shared other resources, which covered topics such as periodisation, shift duration, and the organisation of systems of play. Frank then facilitated a reflective exercise to generate a discussion around game models (Delgado-Bordonau & Mendez-Villanueva, 2012). Eric outlined a first draft of his game model while Frank finalised the concept map based on their latest discussions. Altogether, they worked jointly on the concept map on three occasions while Eric reviewed it three or four times in-between sessions.

The beginning of the regular season (November) brought up issues with the team's leadership, which made this topic a priority for the fifth session. Eric asked if two of his assistant coaches could attend the session since they both contributed to the team's tactical preparation and leadership. The three coaches voiced their concerns regarding the players' lack of leadership. Frank then provided personal and theoretical perspectives regarding these concerns. He then challenged the coaches to develop and implement an action plan based on this conversation.

Throughout the learning journey, Eric participated in five coaching conversation sessions, which happened in spurts (see Figure 2). His personality and workload seemed to have caused this as he manifested lots of interest over a short period of time and then disappeared for a few weeks. More specifically, two activities took place between February 1st and February 16th, two activities occurred between the end of March and the beginning of May, two sessions happened in June, one session in September, and one session on November 21. Lapses occurred in April (immediately after the season's end), August (preparation of the training camp), and October (first regular season games). Although participation was bunched, Eric and Frank jointly produced many iterations of documents such as a concept map, calendars, and a game model. These documents served as a foundation for the coaching conversations. Eric and Frank mostly communicated through emails (n = 38).

The creation of value. Data from the debriefing interview show that Eric perceived that his sessions with Frank created value in all cycles (see Table 3). This table, in the interest of space, only contains accounts specific to his entire learning journey, the coaching certification, and concept mapping. This selection is based on the fact that the coaching certification represented a major milestone for Eric, while concept mapping led to reflection on the team's system of play from June to September (see Figure 2).

The value creation framework analysis shows that Eric was grateful for the support provided by Frank over the 12 months. According to Eric, the relationship pushed him to stop, reflect, and plan, which proved enjoyable at the same time as providing solutions to current challenges (immediate value). Eric emphasised that Frank's support led him to acquire various tools, read a book, and reflect on many coaching topics; things which he would not have done otherwise (potential value). The learning journey led Eric to allot time to learning, redefine his

Article 4 Table 3

Eric’s perception of values created during this collaborative learning experience

	Immediate Value	Potential Value	Applied Value	Realised Value	Transformative Value
Entire Learning Journey	I am happy that you [Frank] brought this reflection at one point : « What are you going to do? How will you follow-up? » I found this very good. If I had to do it over again, I would probably schedule more meetings so that there are more follow-ups so that I don’t let things go.	It was good to read the book together. I don’t have all the tools with me, but we still did a lot. The biggest thing was to reflect on the different themes and to define those different themes. The tools that you brought were interesting.	I used some new tools. Together, we read a book that I would not have read otherwise. In addition, we had a problem this year with a player, but we set a game plan, we followed our game plan, we met her, we found solutions, we gave her tools.	There were some good things in the leadership session. Results were good and it’s not a coincidence that we have 11 recruits and that we have success. I knew the objective was that I get better, and I think that we met this objective.	A coach that stops progressing, it’s somebody that stops looking forward. We need to look for development everyday in our job. If not, we stay at the same level. It made me understand that I need to stop to reflect on some concepts and to define them.
Coaching Conversation					
1b. Certification	Working with you [Frank] helped me complete my high-performance certification.	You helped me access resources from hockey federations and some that define principles of play. You showed me a model used by other coaches for teaching tactics.	From our work that focussed on terminology, I found almost 200 clips related to 12-15 topics. I showed the videos to my players from A to Z before and during practices.	Our collaboration saved me a lot of time to complete my certification, which would have taken much longer otherwise.	Through this work, I also became aware of the importance of peaking at the right time, to modulate the training load according to the time of the year.
2a. Concept Mapping	I had issues initially because I had to download the software on my computer. It’s not always perfect and you have to learn how to use it.	Everything that you [Frank] brought, the reflections, the maps that we started to create, I want to continue to work on that now that I know how. These are tools that I did not have in the past, like CmapTools. I could do one map only for breakouts for example.	I used CmapTools 3-4 times. It’s not enough, but again ... to write down keywords like performance position, skate to the puck, back straight, information gathering, ... these are terms that I use almost every day now. It forced me to vulgarise.	Each coach knows where he is going, we have fundamentals, principles, philosophies; but to open the books again, know what we really want. I opened it again this morning to dive back in. For sure, it was effective.	You helped me discover a new software. It goes with my objective to innovate; I haven’t seen that used in 20 years of coaching. These reflections help you remember things and their connections. I would recommend it to other coaches as well.

terminology, and apply a leadership plan (applied value). The data excerpts show that Eric gained confidence in his coaching ability, which perhaps links to more recruits signing with the program than in previous years (realised value). The companionship reframed Eric's vision of productive coach development and renewed his appreciation for the influence of reflection on coach learning (transformative value).

Work done on the HP coaching certification solved a current problem in Eric's practice (immediate value). Publications and models shared by Frank provided Eric with resources that could help to improve his coaching practice (potential value). Not only did Eric use the process developed with Frank to extract hundreds of video clips, he also showed those videos to his players and used the resources to update his terminology (applied value). The PLC's support increased Eric's efficiency, which eventually led him to complete the HP coaching certification (realised value) and develop a renewed appreciation for planning performance through guided reflective sessions (transformative value).

Although reflection through concept mapping posed some issues, Frank's assistance was critical to Eric becoming familiar with the software (immediate value). In the process, Eric discovered a new software and strategy for organising his ideas and principles of play (potential value). In addition to using the software on occasions, Eric developed a new terminology that he uses in his daily coaching to enhance the clarity of his communication with the athletes (applied value) and noticed an improvement in the staff's assertiveness (realised value). Overall, reflective practice supported by concept mapping changed his perception of learning and the process required to develop effectively as a sports coach (transformative value).

Discussion

Studies on coach learning and development have shown that most coaches learn to coach

through different sources of knowledge (He, Trudel, & Culver, 2018). The importance of these sources varies, making the coaches' learning pathway idiosyncratic (Werthner & Trudel, 2009; Mallett, 2010; Watts & Cushion, 2017). To complement the knowledge acquired in formal programs and to support coaches during their first coaching years, mentoring programs are sometimes offered (Koh, Bloom, Fairhurst, Paiement, & Kef, 2014; Sawiuk, Taylor, & Groom, 2017; Sawiuk et al., 2018). Beyond this, it is up to coaches to deliberately search for and create meaningful learning activities to pursue their development (Lara-Bercial & Mallett, 2016). Deliberate practitioners are continuous learners who question what they do, are curious about what others are doing, and "aspire to learning more than mastering measurable knowledge and skills; they also aspire to acquiring the means to support their need for perspective, value and meaning-making through a lifelong journey of learning and change" (Trede & McEwen, 2016, p. 9). However, the coaching literature suggests that HP coaches, which include intercollegiate coaches, often have difficulty critically reflecting on their coaching practice (Lara-Bercial & Mallett, 2016; Cushion & Nelson, 2013) because (a) they are under pressure to have their athletes/team perform on a regular basis (Lara-Bercial & Mallett, 2016; Koh, Mallett, Camiré, & Wang, 2015), (b) they often feel alone (Gallimore, Gilbert, & Nater, 2014; Hall & Gray, 2016), (c) their reflective process lacks structure (Hall & Gray, 2016), and (d) their work place is rarely organised to provide a rich learning and developmental environment (Mallett, Rynne, & Dickens, 2013; Rynne, Mallett, & Tinning, 2010). In an attempt to address the missing piece in HP coaches' development (how to keep learning after certification), this study details a new coach development initiative with two intercollegiate coaches. Based on the approach (Stelter, 2014), a PLC established a supportive one-to-one relationship with two coaches to help them reflect on their current coaching practice and progressively work towards becoming deliberate

practitioners (Trudel & Gilbert, 2013).

This article presented the main elements of the 12-month learning journey of two ice hockey coaches and the value they gained from it. Frank, the PLC, played an influential role in the creation of a safe space for the coaches to freely engage in coaching conversations (Stelter, 2014). Several factors contributed to this non-judgemental environment. First, Frank was not an employee of the organisation for which the coaches work and therefore power issues were not a concern (Stelter, 2014). It was explicitly made clear to all involved that Frank would not assess the coaches' performance and would not report the details of their partnership to the HP director. Second, Frank had no experience in hockey. This might have facilitated the presentation of new coaching perspectives (Stelter, 2014). Third, Frank's experience, as an athlete and coach in another intercollegiate sport, made him credible because coaches are less receptive when they feel that "educators lacked the necessary coaching experiences and identities" (Watts & Cushion, 2017, p. 83). Frank was not merely a facilitator guiding the coaches in *solving* problems. He was a 'fellow human companion' in a co-creative and collaborative process aiming first at *setting* current problems before looking for solutions or developing new ways of doing things (Stelter, 2014). This combination of characteristics in the PLC must be acknowledged as being a very important aspect that contributed the narrative collaborative coaching process.

As shown in both cases, Frank was not trying to teach a specific coaching topic or approach. The dyads were able to identify the best sources of learning (mentor, reflective tools, publications, etc.) for a specific coaching topic through open conversations. To be effective in his role, Frank had to use core personal coaching competencies (i.e., active listening, establishing trust, powerful questioning, etc.; International Coaching Federation, 2017), bring new perspectives, and share tools from his personal coaching experience and the sport coaching

literature. The knowledge of sport science is a key element that differentiates a PLC from a mentor. At a time when coaching is becoming more and more complex, the sport sciences (physiology, biomechanics, psychology, pedagogy, etc.) bring different perspectives to deal with the new challenges (Lyle, 2018; Reade, Rodgers, & Hall, 2008a). Unfortunately, coaches have rarely the time to search for the coaching literature, which is often difficult to find and/or not easy to understand (Reade, Rodgers, & Spriggs, 2008b).

The coaches' 12-month learning journey was structured in four phases (inception, preparation, coaching conversation, debriefing). Through the activities in the inception and preparation phases, Frank was able to provide a space for the coaches to speak about who they are, their current coaching approaches, and areas to improve without focusing exclusively on their weaknesses. For Stelter (2014), such preliminary work is essential to help "the coachee [HP coach] develop a fundamental sense of acceptance and trust in relation to the coach [PLC]" and "it gives the coach an opportunity to listen to a story that forms the basis of the ongoing dialogue and developmental process with the coachee" (p. 130). At the end of these two phases, in both cases, the coach and the coachee developed a list of coaching topics to address in the next sessions. Both coaches identified 'productivity', which might suggest that intercollegiate coaches feel the pressure to have their sport program succeed (Slack & Parent, 2015; Tsitsos & Nixon, 2012). While both participants discussed other topics (e.g., leadership, tactical preparation) during the coaching conversation phase, each coach's most influential topic arose during the first coaching conversation session for both coaches. Frank suggested that Gary discuss with a mentor improving his team's power play, which then sparked conversations on tactical preparation and technical preparation. Eric was concerned with an assignment he had to complete regarding his system of play for his HP coaching certification. This dyad had many exchanges between and

during sessions to improve the concept map, which brought up other topics such as tactical preparation and game models. The flexible approach and engagement in deep conversation afforded the emergence of these meaningful learning topics and activities.

The content of the phases in this study could not be predicted because it flowed from the coaches' strengths and areas to improve, the emerging challenges that come with coaching daily, and the dialogue. This flexibility contrasts with pre-planned programs in which gaps between the coaches' actual competencies and those of 'ideal coaches' are assessed up front and the what, how, and when to teach are carefully decided in advance (Tsang, 2013). The journeys of these two coaches can thus be called 'a journey in the unknown' (Drake & Stelter, 2014). It is unlikely that other coaches will have identical journeys even if they have the same PLC. Gary, with seven coaching conversation sessions, the many documents co-created with the PLC, and many emails and phone calls, was clearly more involved in the learning journey than Eric who said: "If I had to do it over again, I would probably schedule more meetings". The willingness to engage and actual implication of coaches in any meaningful learning situation, and what they gain are influenced by the individual's cognitive structure: that is, their previous experiences, conception of knowledge, approaches to learning, emotional states, and future perspectives (Trudel, Culver, & Werthner, 2013).

For many organisations, such as intercollegiate sport programs, agreeing to embark on such flexible coach development programs may seem hazardous. Doing so requires distancing oneself from traditional approaches of accountability that value the attainment of precise objectives coming from best practices, and which provide a sense of certainty and allow replication. Also, there needs to be a shift to a developmental evaluation approach that "supports development of innovations and adaptation of interventions in dynamic environments" (Patton,

2011, p. 23) and “aims to nurture hunger for learning” (p. 26).

Conclusion

Because of globalisation and advances in technology, our personal and working lives are more complex (Jarvis, 2007) and this is also true for sport coaches (Watts & Cushion, 2017). In addition to the absence of forthright answers to common questions, “we no longer have access to knowledge that offers immediate answers to the challenges we are facing” (Stelter, 2014, p. 3). In a position paper on the range of learning opportunities that contribute to development of coaches, Mallett, Trudel, Lyle, and Rynne (2009) mentioned that it is unproductive to search for the one superior opportunity because each one has its unique contributions in a lifelong learning journey. Therefore, providing a PLC to HP coaches should not be seen as a panacea. As with any other sources of knowledge acquisition, there are advantages and limits. We recognise that more studies are needed to document: (a) Who is best situated to act as PLC and how should a PLC be prepared to play this role?; (b) Which HP coaches will most benefit from this learning approach?; (c) What, if any, is the best moment in the coaching year to begin this personal coaching approach?; (d) What is, and how to determine, the ideal duration for the approach to help HP coaches become deliberate practitioners, without developing a dependence to the PLC?; and (e) How should sport organisations make coaches and administrators aware of the value of offering a PLC to their HP coaches?

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Chapter 7: General Discussion

General Discussion

The purpose of this doctoral dissertation was to advance the scientific knowledge on the development of high-performance (HP) coaches by proposing a new developmental approach to help intercollegiate sport coaches learn from their coaching practice. This work involved using narrative-collaborative coaching (NCC) within an appreciative inquiry (AI) framework, embodied by a personal learning coach (PLC), to accompany intercollegiate sport coaches in their learning journey. Considering that the main results have already been discussed in each of the four articles, I decided, as means of avoiding repetition, to discuss the general findings of this doctoral dissertation across six sections: (a) the review of the quality of this action research, (b) the answers to the research questions, (c) the place of lifelong learning in our society, (d) my learning journey as a PLC, (e) the theoretical and practical contributions, and (f) the limitations.

Quality Action Research

Quality action research (AR) had to be conducted before a judgement was made regarding the achievement of the research purpose and whether the research questions had been answered correctly. To evaluate the effectiveness of this research strategy, the following questions (adapted from questions introduced by Bradbury and Reason in 2001 to evaluate the quality of AR) will be addressed in turn:

1. Did the AR explicitly develop participation from practitioners?
2. Did reflection about practical outcomes guide the AR?
3. Did the AR include multiple forms of knowing?
4. Did the AR achieve significant outcomes for participants?
5. Did this AR cause the institution and practitioners to remodel their structure?

Question 1: Did the AR Explicitly Develop Participation from Practitioners?

This AR explicitly developed participation from the coaches and the PLC who were involved. A total of 62 coaching conversation sessions with 6 coaches were held, among many other interactions (e.g., phone calls, emails), with coaches participating in the four phases of the research: inception, preparation, coaching conversation, and debriefing. The coaches' active participation also manifested when they selected topics and applied potential value to their coaching practice.

Question 2: Did Reflection About Practical Outcomes Guide the AR?

Practical outcomes were at the centre of the reflective process of drafting, designing, and leading this AR. Practice is integral to NCC (Stelter, 2014) and the value creation framework (VCF; Wenger, Trayner, & de Laat, 2011). The selection of NCC and the VCF is a demonstration of a desire to affect the coaches' practice. The coaches' involvement in the process and the integration of their context, through video self-presentation and negotiations of meaning (among other things), demonstrate that practical outcomes were addressed by the research design. Furthermore, the findings show value creation that goes beyond potential value to applied, realised, and transformative value.

Question 3: Did the AR Include Multiple Forms of Knowing?

The four phases of this research included multiple forms of knowing. As an example of *thinking*, reflective practice was central in creating changes in the coaches' practice. For instance, Article Three and Four showed coaches who benefited from the creation of a safe space for them to reflect, and Article One demonstrated reflective practice using reflective cards. Article One also showed further considerations for *feeling* as a form of learning. This article emphasised the necessity of including emotions in the reflective process, which surfaced as an important consideration in the process of developmental coaching described in the other three

articles. These three articles emphasised the importance of creating a space that considers feelings, stimulates thinking, and encourages acting (Jarvis, 2006), as well as a space that includes a PLC who is there to support and help coaches rather than evaluate or judge them.

The co-creation of applied value suggests that *acting* was also a form of learning used in the coaches' journey. Coaches changed their practice by collaborating with a PLC to produce artefacts. The PLC encouraged coaches to experiment within that safe reflective space. Thus, transforming knowledge and reflections into actions was a central theme.

In addition to the three forms of learning (Jarvis, 2006), the coaches' learning journey comprised diverse learning situations, whether mediated (seminars), solo unmediated (reading), accompanied unmediated (informal mentoring), solo internal (reflective journal), or accompanied internal learning situations (coaching conversation). VCF analyses demonstrate that accompanied internal learning situations, which took centre stage in the coaches' entire learning journey, were a valuable learning situation.

Question 4: Did the AR Achieve Significant Outcomes for Participants?

A review of the long-term goals written by coaches in their autobiography showed that coaches had moved towards achieving their significant outcomes. From Article Three, it was evident that Jennifer believed the research had contributed to her team winning the national championship. She had also been named assistant-coach for the National Senior Women's team was due to participate in the Women's Rugby 15s World Cup. Next, Article Four demonstrated that both Gary and Eric believed that the companionship helped them to gain realised value. Gary's team improved their power play effectiveness on their way to achieving a record-breaking season. Eric's team improved their record during the 2017-2018 season, and he achieved a short-term goal of completing his certification and a medium-term goal of

contributing to the Canadian FISU team (sending two assistants). However, improvements and regressions, successes and failures, and positive and negative outcomes cannot be attributed solely to the companionship and not all outcomes could have been assessed within the period of this research because benefits might only manifest after a few months or even several years (Wenger-Trayner et al., 2011).

The coaches made many changes to their coaching practice; for example, creating a video database, changing their terminology, using a concept mapping software, meeting with mentors, chatting with former players, implementing a new drill progression, developing an effective mental performance structure, improving the clarity of practice plans, writing down their coaching philosophy, and implementing weekly reflective practice. Nevertheless, the coaches struggled to identify practical outcomes. This challenge included coaching actions and behaviours emerging from learning activities not having a precise timeframe, and some of the applied value perhaps being implemented later on, whilst some other value was possibly mixed with other sources of knowledge acquisition. The applied value co-created during this journey suggests that this developmental approach bridges a gap in the coach development literature. Galvan, Fyall, and Culpan (2012) explained that traditional coach education limited the applicability of knowledge acquired by coaches because it did not lead coaches to reflect on how to apply this knowledge to their specific contexts.

Question 5: Did the AR Lead the Institution and Practitioners to Remodel Their Structure?

The institution that approved this research project changed the structure of the coaches' learning environment. In the months following this research project, the institution created a part-time position for a person that would occupy the role of PLC. The position, entitled Varsity

Coach Developer, was established to support the learning journey of coaches who want to participate in this process and to assist the institution in developing its learning environment. The institution furthered their offering to coaches as it instigated companionships with other coaches among other things (such as workshops, communities of practice). Moreover, some coaches have continued to solicit the services of a PLC on a regular (Eric) and irregular basis (Gary and Jennifer).

Research Questions

Two research questions were central to achieving the purpose of this doctoral dissertation. The first research question focused on the process: How does the personal learning journey of full-time intercollegiate sport coaches evolve when they are accompanied by a PLC? The second research question centred on the outcomes: What types of value are co-created by coaches and a PLC participating in a 12-month AR? The four articles written for this qualitative doctoral dissertation explored the theoretical and practical implications of each research question, which are shared in the upcoming sections.

How Does the Personal Learning Journey of Full-Time Intercollegiate Sport Coaches Evolve When They are Accompanied by a PLC?

Article One showed that reflective cards can be an effective means for coaches to engage in solo internal learning situations; however, this experience with reflective practice was still challenging. The article concluded with a suggestion that coaches would benefit from having a person who acts as a sounding board, an approach which would help enrich the reflective process and link reflective sessions together (Koh, Mallett, Camiré, & Wang, 2015). The findings presented in Article Three and Article Four demonstrated that each learning journey is unique to each coach, whether it is the set of coaching topics, types of learning activities, or amount of

interactions. Further, coaching topics and learning activities have evolved in synchronicity with the coaches' responsibilities in specific phases of the season. Article Two described an operational framework for anyone wishing to take up this role (a PLC). This article offers a guide for a PLC to create a productive relationship with an HP coach, something that would evolve with the coach's own practice. Findings from Article Three deepen our understanding of companionship between an HP coach and a PLC. The article provided an excerpt of a conversation that took place between Jennifer and Frank and that suggests that a PLC can stimulate a coach's reflective process, thus altering the journey, by providing alternative perspectives and by asking powerful questions.

All three cases (Eric, Gary, and Jennifer) demonstrated that learning journeys evolved with consideration for the phases of their team's seasons and with an exploration of a variety of coaching topics that varied based on their current needs and wants. Of note, Article Three added an example of support provided to a successful female coach to the literature. Considering there are few female coaches (Canadian Association for the Advancement of Women and Sport and Physical Activity, 2018), authors have emphasised the need to provide evidence-based strategies for supporting women in sport leadership position (Culver, Kraft, Cayer, & Din, 2019), preferably using a positive approach such as the one presented in Article Three (Lavoi, McGarry, & Fisher, 2019). Female coaches seem to prefer learning approaches that actively involve them in designing the plan, in leading the learning activities, and in contributing to the learning process (Banwell, Kerr, & Stirling, 2019; Culver et al., 2019). Article Four shared two additional examples. Eric and Gary's experiences differed, a result which suggested that accompanied learning journeys led coaches to participate in a distinct number of coaching conversation sessions and to cover a unique set of coaching topics. Head coaches used the companionship in

unique ways, although all journeys were initiated using the same research approach. It can be assumed, therefore, that personal coaching approaches would be unique (Drake, 2015; Jackson & Cox, 2018; Stelter, 2014).

The findings also suggested that strengths-based approaches, such as AI, do help coaches engage in learning activities and in deliberate reflections (Trudel, Gilbert, & Rodrigue, 2016). This doctoral dissertation demonstrates an approach that helps coaches foster self-reflection and collaboration to challenge their practice; a strategy which was deemed essential to the learning, and thus the successes, of serial winning HP coaches (Lara-Bercial & Mallett, 2016). Considering that HP coaches tend to take little time to reflect on their coaching (Gallimore, Gilbert, & Nater, 2014; Knowles, Katz, & Gilbourne, 2012), and have also been criticised for not prioritising personal development due to heavy workloads (Rynne & Mallett, 2012), the learning journeys that were co-created during this AR suggest that a PLC (using this research's approach) would help HP coaches to prioritise their learning and to take time to reflect.

In summary, the evolution of the learning journey of an intercollegiate sport coach who is accompanied by a PLC will be unique in terms of the number of sessions and interactions, set of covered coaching topics, length and depth of coaching conversations, and integration of the PLC in the team's and institution daily activities. Some coaches (such as Jennifer) will be independent by the end of the 12-months, whereas other coaches (for example Eric) will still rely on the services of the PLC after that time.

What Types of Value are Co-Created by Coaches and a PLC Participating in a 12-Month Action Research?

The value creation analysis showed that value was created in five different value-creation cycles by the dyad and that it enabled the formation of complex value creation stories (Wenger-

Trayner, Wenger-Trayner, Cameron, Eryigit-Madzawamuse, & Hart, 2017). Coaches enjoyed their learning journeys, which led them to acquire knowledge, apply new practices, improve their performances, and change their beliefs. Although outcomes are not discussed in Article Two, this article explains the perspective that led to the use of the VCF as a tool to analyse the coaches' participation. According to the State-of-the-Art review (Chapter 3), Article Three is the first publication to explicitly demonstrate the outcomes of an individual's learning journey through the VCF with consideration for various types of learning outcomes. Article Four adds two other examples of the outcomes of learning journeys to be analysed using the VCF. Together, these examples show complete value creation stories in which coaches have gained value across the five cycles of value creation (Bertram, Culver, & Gilbert; 2016; 2017; Vinson et al., 2019). The PLC was able to facilitate coaching conversations on various topics (such as mentoring, certification, and tactical preparation) and to answer the coaches' *just-in-time* needs, which generated complete value-creation cycles. These complete value creation stories contain data pertaining to an enjoyable experience, insightful information, new coaching practices, beneficial outcomes, and changed beliefs. Article One did not explicitly discuss the VCF, but the coach's explanations of the benefits gained from engaging in reflective practice through reflective cards suggest that the VCF might have been a valuable aid in analysing the contribution of the learning situation (Wenger-Trayner et al., 2011). Among the reported benefits, the coach underlined that the use of reflective cards led to the identification of weaknesses in performance (potential value), to the generation of new coaching practices (applied value), to the identification of effective coaching strategies and behaviours (potential value), and to the improvement of coaching staff cohesion (realised value).

Together, these four articles demonstrated that the VCF is an effective tool to assess

learning activities, although only positive value was captured in this AR. It did not capture negative value for two reasons: (a) the positive perspective of this research's approach, and (b) the version of VCF used (Wenger et al., 2011). In doing so, it hinted that the current problems with other learning situations (outlined in Chapter 3) exist because these situations mostly provide Immediate and Potential Value. Coaches then perceive these situations negatively because they provide limited value for their practices (applied value) and their outcomes (realised value).

Finally, this AR co-created complex value creation stories. Coaching is a complex activity (Jones, Bailey, & Thompson, 2013), and coaches have idiosyncratic learning pathways (Mallett, 2010; Werthner & Trudel, 2009), therefore it is perhaps fitting for coach development administrators to employ an assessment tool that considers this complexity and these idiosyncracies. This assessment tool (the VCF) could also help coach development administrators enhance the completeness of developmental initiatives made accessible to coaches if considered beforehand.

Lifelong Learning

The findings of this research suggest that the development of an HP sport coach is valuable when an open-ended, personalised learning strategy is used to co-create a flexible and timely learning journey that considers the culture and context that surrounds the coach. The approach employed integrated the components of the theory of lifelong learning to support the learning journey of intercollegiate sport coaches (see Table 16).

Table 16 shows the coherence between the theoretical framework (i.e., theory of lifelong learning), the practical guide (i.e., coach development model), and the new developmental coaching approach used during this doctoral study. Beginning with an understanding of each

Table 16

Elements of the Theoretical Framework Matched with this Doctoral Research

Theory of Lifelong Learning (Jarvis, 2006)	Coach Development Model (Trudel et al., 2016)	Personal Learning Coach
Biography : <i>The person's current understanding of the world.</i>	Coach identity evolution	Autobiography
Life-world : <i>The multiple dimensions of reality that a person experiences.</i>	Coaching context	Video self-presentation
Harmony : <i>A situation that is consistent with the person's current understanding of the world.</i>	Learning situations	Learning Activities
Disjuncture : <i>A situation that is inconsistent with the person's current understanding of the world.</i>	Learning situations	In-person meetings Companionship
Space : <i>Sensory experience and interactive experiences that happen in the physical and social space respectively.</i>	Interactions between components	Video self-presentation PLC familiar with context
Culture : <i>Knowledge, skills, attitudes, beliefs, values and emotions that we, as human beings, have added to our biological base.</i>	Learning situations	PLC knowledge of science Companionship
Technology : <i>Technology simplifies access to information, enables real-time collaborations, and proliferates learning opportunities.</i>	Learning situations	Synchronised coaching topics
Time : <i>The timing at which a person's lives an episodic experience.</i>	Learning situations	Safe reflective space Guided towards applied value
Thinking, Acting, & Feeling : <i>Ways of experiencing the world that could lead to changes (i.e., learning).</i>	Learning situations	

coach's *biography* through the autobiography exercise and then the understanding of each coach's *life-world* through the video self-presentation helped the dyad to generate *disjuncture* during the learning activities. Learning activities were conducive to *disjuncture* because they happened within a safe reflective space that promoted the coach's engagement in the process of becoming that is learning. This *space* allowed coaches to engage this process of becoming because the companionship's structure invited coaches to *think* about their coaching practice, *act* on their coaching practice, and *feel* emotions related to their coaching practice. Further integration of the theoretical framework happened as the dyad strived to synchronize the *time* at which coaching topics were explored with their coaches' practice. *Technology* thus enabled the coaching conversation to continue because, at any time, ideas could be shared and informal meetings could happen, though coach and PLC might have been distant from one another. This complete integration may explain the capacity of these companionships to co-create value for the coaches' practice although the approach's content changed as the journey evolved.

Learning is not a linear endeavour. More effort into acquiring knowledge or exploring new practices will not produce a linear increase in return. Rather, the most important concern is the value generated (output) by the learner per units of effort (input) invested into the learning process (Ravikant, 2019). It is a matter of value gained (output) from learning rather than effort put (input) into learning. Similar learning situations do not all lead to an equivalent output, an output that will create the same amount and same type of value for a coach's practice. This doctoral dissertation demonstrates that efforts put into learning (input) lead to the creation of different values (output), depending on biography, context, time, and activity. Further, coaches do not progress sequentially through the continuum of coach identity evolution (Trudel et al.,

2016). Coaches navigate their journeys as they see fit for performing in the chaos in which they operate (Jones et al., 2013).

The non-linear learning process means that generating values from time invested into this learning process is increasingly demanding for professionals because society has transformed radically over the last 20 years. Technology has drastically increased our capacity and efficiency to produce and consume information (Kellerman, 2002; Rezaakhsh, Bornemann, Hansen, & Schrader, 2006), mostly because of its prevalence and accessibility around the world (Kellerman, 2004). The emergence of technology also means that the cost of information transactions is decreasing (Atallah, 2004; Rezaakhsh et al., 2006). Thus, less time is required to exchange with colleagues in other countries and to acquire a resource that provides us with a valuable piece of information regarding an important concept. This change has resulted in the acceleration of the production of information and knowledge, as witnessed in this century (Hawking, 2018). Producing information and trading knowledge now requires few financial, human, or material resources, other than a computer and a reliable Internet connection. Altogether this change means that (a) professionals face fewer barriers in accessing information, (b) the production of information has substantially increased, and (c) the production of unreliable information has also largely increased (Rezaakhsh et al., 2006). One could thus argue that the quantity of information is not the limiting factor on the value generated by learning activities.

The pace of information production and consumption is an increasing challenge for professionals, such as sport coaches. They have to perform their work while remaining up to date with the rapidly growing knowledge relevant to their work. They must also generate innovations, which are essential to success in this age of information (Grant, 2016; Uzzi, Mukherjee, Stringer, & Jones, 2013). This conundrum is important to consider, particularly because the acquisition of

knowledge and access to the flow of information are essential for innovation (Feldman, 2002; Isaksen & Tripp, 2017). Innovation occurs when (a) professionals augment the number of ideas they generate and implement (Grant, 2016); (b) “exceptionally conventional combinations of prior work features an intrusion of unusual combinations” (Uzzi et al., 2013, p. 468); or (c) people create new ideas through questions, observations, experimentations, and networking (Dyer, Gregersen, & Christensen, 2009). Professional success thus becomes a matter of professionals working to increase their capacity to generate ideas, try new practices, ask questions, observe, and network. However, keeping up with the flow of information is increasingly difficult.

This thesis thus suggests that personal coaching can help professionals, such as sport coaches, to optimise the input of their non-linear learning journey, to remain up to date with knowledge more easily, and to perform actions conducive to innovation. In this research, the PLC invited coaches to generate ideas, explore other perspectives, question the current understanding, observe other professionals, experiment with novel practices, and network. These actions suggest that a PLC who uses appreciative inquiry as a structure and who employs narrative-collaborative coaching can be a valuable guide for exploring domain knowledge, a catalyst for learning, and a facilitator of innovation. Notwithstanding, a PLC cannot learn or innovate *for* the sport coach; however, the PLC can help orchestrate learning situations that will encourage the sport coach to explore other sources of knowledge acquisition and investigate other perspectives that will be conducive to learning and innovation.

My journey as a Personal Learning Coach

The evolution of the coaches’ journeys and the generation of value make me, the PLC, marvel at the concept of learning in this age of information. From the day we are born, we

embark on a lifelong journey into the unknown, in which we are, as individuals, the main driver but inevitably significantly influenced by the social space in which our journey occurs (Jarvis, 2006). Occupying the role of a PLC throughout my doctorate, I developed an appreciation for lifelong learning. By stating that, I do not pretend to fully understand learning. If anything, the completion of this doctoral dissertation has made me realise that I understood little about learning from the outset, especially in the studied coaching context.

HP sport is a complex environment that pushes its actors to experience chaos (Jones et al., 2013). Throughout my doctorate, I engaged in actions that led me to experience chaos – *disjuncture*: reading articles and books about learning, sport coaching, and personal coaching; interacting with practitioners (such as coaches, administrators, and support staff); and exchanging with scholars online and at conferences.

This action research operated in collaboration with intercollegiate sport coaches could not have been completed without a complete commitment and engagement of both the participating coaches and the PLC. Although the coaches' role was essential, my experience of becoming a PLC was quite a journey. From the *inception* phase, I felt strong emotions related to the coaches as people and to their teams' performances, which is normal. However, I had to find a balance between my personal investment and directly participating in the team's activities. Furthermore, I lived a very emotional experience when a participant had to withdraw from the project due to a severe health issue. That event put everything into perspective and reminded me about the place of the person in their development. In the ensuing *preparation* phase, I realised that following a list of pre-determined topics rigidly would not answer the coaches' needs, maintain their level of engagement, and create the most value for their practice. This reflection, among other things, led me to engage in deep conversations with my own personal learning coach – my supervisor. At

some point in one of our bi-monthly conversations, we came to an agreement that a learner-centred journey had to consider the coaches' needs, whilst being synchronised with their coaching practice. This agreement encouraged me to be more responsive to their ideas, perceptions, and appreciation throughout the process. As the *coaching conversation* phase unfolded, most teams had positive seasons, a result which can be attributed to a significant number of factors other than their accompanied learning journey. It was thrilling to follow Jennifer's success. I was passionate about the weekly performance of Gary's team. I enthusiastically followed-up with Eric as they challenged the best teams in the conference. For those coaches who had losing seasons, I consider that I had helped them persevere through the hardship. Each PLC's journey who accompanies coaches in their learning is certainly unique.

For people aspiring to become PLCs, the developmental activities are akin to being a scholar of coaching coaches. This position is unlike any other in the sport system. To occupy that position effectively, a PLC needs to learn continuously about three different areas: (a) sport coaching, (b) sport science, and (c) NCC. I recommend adopting a lifelong learning mind-set, and actively participating in a community of practice, regardless of whether these communities are specific to sport. I invite PLCs to orchestrate their social learning actively, meaning that PLCs should nurture relationships with professionals in all sectors of sport, such as with mental or physical performance coaches. The idea is develop a network, along with an understanding of the sport landscape, to direct the coach effectively within coaching conversation sessions, and to have a holistic perspective of coaching effectiveness.

Theoretical and Practical Contributions

This doctoral dissertation makes novel theoretical and practical knowledge contributions to the field of sport coach development, and more specifically to the topics of HP coach

development, HP coach learning, and developmental coaching. Nevertheless, the complexity of this context and the evolution of society emphasise that this dissertation should be understood as a single doctoral dissertation that makes some novel contributions, which are inherently contextualised to HP coach learning.

Theoretical Contributions

At best, it provides a new pair of theoretical glasses for current and future researchers in sport coaching to use when conducting HP coach learning research or examining personal coaching of sport coaches. Thus, this doctoral dissertation makes the following theoretical contributions:

- Advancing a terminology of learning situations by including one more division (solo versus accompanied);
- Presenting a new approach to support coaches through a strengths-based approach: AR operationalised using AI;
- Demonstrating that value creation has occurred from participation in this developmental approach via VCF analyses;
- Using the VCF to assess the outcomes of the learning activities and journey of individual coaches;
- Introducing a new actor who could support the coaches' learning journey;
- Adding to the literature that demonstrates the value of NCC as a developmental coaching approach to support the learning of HP sport coaches (Milistetd, Peniza, Trudel, & Paquette, 2018);
- Providing a reflective card model for coaches to use as a tool to reflect on their practice.

This dissertation thus helped advance scientific knowledge on the development of coaches.

Reflecting upon the findings of this doctoral dissertation, I believe that the use of a developmental coaching strategy, as opposed to a performance coaching strategy, was instrumental in the coaches' continuous participation in the accompanied learning journey, and the generation of complex and multi-level value creation stories. Coaches were motivated to participate continuously to this type of companionship supported as demonstrated by their participation rate. All three head coaches completed the 12-month learning journey with each coach attending an average of 11.6 coaching conversation sessions over that span. Beginning with the coaches' needs and synchronising the coaching topics and learning activities with their evolving practice perhaps played an influential part in that. Most importantly, it allowed coaches to generate value fluidly from one topic to another, from one learning activity to another, from one value creation story to another. According to my understanding, it would have been difficult to achieve this level of fluidity with a performance coaching approach due to pre-determined topics and activities creating a rigid framework. In short, the coach drove the learning journey, which was essential to the multiple cycles of value that were co-created through these three head coaches' journeys.

Valuable learning initiatives "can be enlightening for people for whom formal teaching or training methods have always been seen as the only way to learn" (Wenger et al., 2011, p. 20). Collaborating with a PLC to co-create a safe reflective space that promoted critical reflection within a strengths-based coach-driven approach certainly provided such learning capital. This experience ultimately transfers to other contexts of the coaches' personal and professional life (Wenger et al., 2011). The coaches' participation exposed them to a different learning paradigm (participatory) and made them aware of other types of learning situations, which transformed their understanding of learning.

Practical Contributions

Most of this dissertation examined the role of PLCs from the perspective of researchers, coaches, or PLCs. However, there are important practical contributions made and considerations stressed for actors of the sport system interested in implementing this approach and this new actor.

First, certification should not be part of the process of establishing personal learning coaches in the sport system although personal learning coaches should meet some criteria according to my reflections from completing this doctoral dissertation. Certification essentially takes place for two reasons across professional bodies: (a) to assess and validate professional competencies, and (b) to offer ethical and legal protection to clients. In my scientifically informed opinion, assessing the competencies at a given point in time of personal learning coaches is irrelevant. Professional learning in the age of information should steer away from approaches that rigidly define competencies, such as a certification processes. Most certification processes established by professional organisations intend to protect clients against its members – patients against physicians, clients against engineers. As recommended in this dissertation, personal learning coaches who use narrative-collaborative coaching will refrain from making explicit recommendations for the coaches' practice. It would thus make successful legal actions fairly impossible. Nonetheless, this potential legal concern stresses the importance of having personal learning coaches familiar with coaching science. A PLC that would support coaches with scientifically informed and trustworthy concepts and principles would render legal actions obsolete. The issue of certification to guarantee effectiveness becomes less relevant if individuals with the adequate biography are put into that role. Ideal prospective PLCs would have graduate training in the personal coaching and learning sciences while also having experience coaching.

Such training would ensure that they have a functional understanding of reflective practice and learning theories, and thus favor their adoption of a perspective that is conducive to strengths-based, coach-driven, non-linear learning journeys. These reasons altogether underline the triviality of certifying personal learning coaches.

Second, HP directors will be influential in introducing this actor in the sport system. This doctoral dissertation thus highlights five recommendations for HP directors that are open to this new coach development approach:

1. **I recommend that HP directors suggest this new developmental approach to their coaches but always make it optional to opt-in.** As argued in Chapter 2, a learner must choose to learn. This learner-driven approach makes a mandatory participation detrimental to the process' evolution and the co-creation of value. HP directors should present the approach's principles to their coaches and position it as *one of* the developmental strategies put in place by the organisation to support their lifelong learning.
2. **I recommend that HP directors make at least three PLCs available to their sport coaches.** The *right match* between a PLC and an HP coach cannot be guaranteed as it depends on personality (e.g., attitudes, mannerism) and familiarity with the sport (e.g., team sport or individual sport) among other things. Access to three PLCs favours a minimum level of variety between the PLCs personalities, which then increases the odds of getting the right match with participating coaches. HP directors then simply have to present the profile of each PLC and let coaches choose who they want to co-create with.
3. **I recommend that HP directors develop a simple and short assessment to identify that prospective PLCs meet the five criteria.** Given the three criteria recommended in

Article Two and the ensuing reflections in this section, PLCs should (a) master narrative-collaborative coaching, (b) possess an understanding of sport science, (c) be familiar with the coaching context, (d) know reflective practice strategies, and (e) understand learning theories (Jarvis, 2006; Wenger-Trayner et al., 2017). It thus becomes essential that HP directors have the ability to identify that PLCs meet these criteria before initiating any form of companionship.

4. **I recommend that HP directors position PLCs outside of their organisation.** As argued in the dissertation, there are problems with coach development actors who are employees of an organisation. First, these actors tend to force organisational agendas onto coaches, which is a move towards a performance approach to coach learning. Second, there are power issues arising when actors who help coaches to learn are also the evaluators of these coaches. It compromises the safety of the learning space.
5. **I recommend that HP directors include contractual hours for PLCs to tour their organisation and attend some of the coaches' daily activities to favour the PLCs' understanding of the coaches' context.** Familiarity with the coaching context is essential for PLCs to bring relevant material to the coaching conversation and ask relevant reflective questions. My experience in this role suggests that attending meetings with the organisation's direction helps to understand the scope of the coaches' tasks. My experience also suggests that coaches embrace the developmental approach more strongly when the PLCs attends the team's activities, as it is a sign of that the PLC cares about the coach's practice. This exercises also helps the PLC to understand the conditions of the coaches' training environment.

The HP directors' power within their organisation provide them with the opportunity to enable the creation of companionships between their coaches and this new actor. HP directors must remain aware that organisational objectives could distract from believing and living the proposed developmental approach. Something that leaders of sport organisations should always keep at the forefront of their thinking about coach development as there is a difference between performance coaching and developmental coaching of HP coaches.

Limitations

The experience of being a PLC, and findings, is limited to a 12-month learning journey that happened in one coaching context and with team sports coaches only. I am curious to learn more about the considerations and implications for both amateur HP sport and professional sports contexts. Due to the fact that I am continuing my work with coaches, coach developers, and national sport organisations, I have reflected on two questions: (a) What else could I have done? and (b) If I had to do it again, what would I do differently?

Regarding the first question, I consider that there are few things I could have done more although I offered support to the five participating coaches from January to December. First, I could have revisited the coaches' uplifting propositions with them more regularly. I have used these propositions to ground our coaching conversations, but I did not use them to inspire coaches. Second, I could have used the VCF to debrief the outcomes of learning activities and coaching topics during the journey. The use of the framework may have helped to identify value gaps and then guide us towards creating value where some preceding value-creation cycles had not been maximised. Finally, I did attend a few of each coach's competitions, but I ought to have attended more games knowing that coaches trust people who are dedicated and caring.

Reflecting on what things I would do differently made me realise that I could have increased my availability. I frequently offered limited and specific time slots to the participants. Offering more time slots could have ease the coaches' ability to schedule in-person meetings, and thus increase participation. In this research, such an approach may have limited the engagement of some coaches. I would also strive for a different balance between laissez-faire and active intervention. I often adopted a laissez-faire leadership because it was coherent with this research's perspective. I did not want to force coaches as they have to commit to learning themselves. In this research, adopting a laissez-faire style may have reduced the coaches' engagement, whereas encouraging them explicitly to participate more could possibly have increased their participation rate. At last, I would synchronise the beginning of the coaches' 12-month accompanied learning journey with the start of their sport's off-season. For coaches of Fall sports (such as rugby), I would initiate the process in December, and I would launch the journey in April for Winter sports (such as hockey) coaches.

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Chapter 8: Conclusion

Conclusion

To conclude this doctoral dissertation, I would like to invite researchers to explore other areas of coach development research. First, data relating specifically to the optimal amount of time and frequency that coaches should spend with their coach developers, mentors, or PLCs are still lacking. Second, although arguments are made for strengths-based approaches, the coaching community would benefit from further study on the implications and consequences of deficiency-based approaches. Third, more information seems necessary regarding the role of the organisation in fostering a learning environment. Fourth, more information regarding the characteristics of a productive learning environment for sport coaches is needed. Fifth, other personal coaching approaches should be explored. Finally, a study that compares the perception of coaches' who experience developmental versus performance coaching would be beneficial to the understanding of personal coaching for sport coaches. Having completed this doctoral dissertation, I would invite coach development and learning researchers to consider a number of factors for the advancement of the field. Future research should consider the social learning component (e.g., LoP, CoP). The integration of social theories of learning could advance our understanding through an examination of the ability of sport organisations to become deliberately developmental organisations. I would also learn more about the concept of group coaching because not all coaches may be able to afford personal coaching services, and because it may answer organisational needs.

Professionals that have exposure to the findings of this research should realise that the objective of learning is not to gather more information, but rather to collect relevant information with space to reflect. Such an approach helps to understand concepts better. An improved understanding of concepts enables a coach to identify best principles for that given concept.

Understanding of these best principles can then be used to generate effective practices. Today, effective practices are context specific and information is produced at a faster rate than ever. A coach with a functional understanding of a concept and the associated best principles can then transform this understanding into best practices for the environment, the context, and the peculiarities of the situation at any given time.

We are moving towards a future where personal coaches will become more prevalent because professionals will increasingly struggle to remain on top of the knowledge necessary to perform their tasks. A PLC can help sport coaches co-create diverse value from their learning journey, generate contextualised practices, and extract more value from their learning efforts (input). Altogether, this doctoral dissertation made me realise that the objective of a coach's learning approach should be to answer the following question : "How do you create a learning environment conducive to enhancing the coaches' understanding of concepts, identification of best principles, and generation of contextualised practices?"

Appendices

Appendix A – Narrative Interview Guide

Pre-Interview:

- Informal discussion to introduce participants and the research to one another.
- Explore the participant's superficial biography (e.g. name, position, etc.)
- Explain the basis of the interview and provide an overview of the questions.

Background Questions

In *italics* are reminders of the question's aim for the interviewer.

Additional bullets represent a bank of questions that may be asked if needed.

1. _____ (Name), how did you first get in contact with sports?
Probe the feeling behind that first contact.
 - Did you have any idols? If so, why them?
2. From that first contact with sports, what do you still carry with you as of today?
Probe for instances of lifelong, social, reflective, and/or meaningful learning.
 - What did you learn that is still useful in your coaching today?
 - What events of your athletic career influenced your coaching?
3. When did you actually start coaching and how did that happen?
Probe the motivation behind this first experience.
 - Did you have any predispositions for coaching at first?
4. How did you come to have the current position that you have?
Probe the events on the path that lead him to that position
 - Could you provide a brief overview of this path that you took?
 - How long have you been coaching in your current position?
 - What circumstances led you to coach at your current position?
5. Consequently, why would you say that you started to coach _____ (sport)?
Probe the specific reason that made him start
 - Do you have any coaching experience in sports other than _____ (sport)?

Narrative Interview

Part 1: Exploring past experiences of success

(What is successful right now?)

1. If you had to write a book or shoot a movie of your coaching career, from your first contact with sports to today, what would the story be?
Leave the stage to the participant. Probe only when he pauses for a long time.
 - What are the events that made you the coach that you are today?
 - What made those events significant to you?

- Are there any general life events/training/interactions that have helped you in your coaching? If so, which one?
 - According to you, what are the activities that contributed successfully to helping you become the coach that you are today?
2. What aspects of your coaching make you most successful as a coach today?
Note down the areas or aspects that make him most successful
- How did you learn to _____ (aspect/competency)?
 - How did you learn about _____ (area/knowledge)?
 - What made those learning instances significant to you?
 - Is there any other training or certifications that you think you should have mentioned and that helped you become a better coach?

Part 2: Conceptualizing the participant's best future

(What do you need to keep doing and stop doing to make a better future now?)

3. If you had to foresee the best version of yourself as a coach, what would it look like?
Probe for as much detail as possible. Note down coaching topics or learning activities.
- How will you know when you have reached that?
Considering this, how good do you want to be?
 - What are you ready to do to be that good?
How bad do you want it?
4. If you had to build the ideal path of professional development for you to reach that best version of yourself, what would it look like?
Probe for as much detail as possible. Note down coaching topics or learning activities.
- Why would it be significant to you to do coach development this way?

Conclusion

1. In short, where would you like to be in 4 years?
2. Is there anything that we haven't covered and that you think we should have?

N.B. The interview guide will include modifications and/or new questions during the interview performance as a result of the elements brought up by the participant's answers.

Appendix B – Video Self-Presentation Interview Guide

Pre-Interview:

- Explain the goal of the meeting and provide an overview of the agenda.

Semi-structured Interview

Ask main question, then probe for elaborations and explanations.

Part 1: Introduction

- How do you feel about your coaching at the moment?
- How did the last two weeks go?
- Do you specifically remember when I observe your practice?
- What do you recall?

Part 2: Video Self-Presentation

- The coach and the PLC watch a minimum of three video clips from the training session.
- The PLC invites the coach to (a) narrate the video clips, (b) identify positives elements about his coaching practice, and (c) identify negative elements about his coaching practice.

Part 3: Conclusion

- If you had to do it again, what would you do differently?
- What do you have in mind for the next few weeks?

Post-Interview:

- Informally discuss the process of observation and self-presentation.
- Schedule the next session : list of coaching topics.

N.B. The interview guide will include modifications and/or new questions during the interview performance as a result of the elements brought up by the participant's answers.

Appendix C – List of Coaching Topics Discussion Guide

Pre-Interview:

- Share assignment instructions with the coach
- Review the completed assignment
- Bring the list of learning strategies
- Explain the goal of the meeting and provide an overview of the agenda.
- Informal discussion around the coach's current state of mind.

Semi-structured Interview

Ask main question, then probe for elaborations and explanations.

Part 1: Introduction

1. How was it to complete the list of coaching topics?
2. How did you do it?

Part 2: Presentation of Topics

3. Now, I would invite you to present each topic and tell me what they mean for you? (The PLC makes sure that the coach presents all five topics)

Part 3: Discussion about Topics

4. When you said _____, what did you mean?
5. According to our last two meeting, I think that _____ is important for you. What do you think?

Part 4: Selection of Preferred Topics

6. Based on today's discussion, what are the five most important topics for you ranked from 1, most important, to 5, least important?
(The PLC asks probes, makes reminders, and identifies links to facilitate the process)

Part 5: Development of Uplifting Proposition

7. Before we leave today, I would invite you to write down an uplifting proposition for each of the five topics. An uplifting proposition is a statement that illustrates the target that you have in mind for that topics. It's a statement that proposes the ideal, that is positive, and that challenges your highest aspirations.

Post-Interview:

- Informally discuss feelings and thoughts about today's meeting.
- Schedule the next session : development session.

N.B. The interview guide will include modifications and/or new questions during the interview performance as a result of the elements brought up by the participant's answers.

Appendix D – List of Coaching Topics Assignment Instructions

Assignment Instructions

- Reflect on your current strengths as a coach.
- Reflect on the improvements you have to make to become the best coach that you can be.
- Reflect on the developmental pathway you would want to take to achieve that.
- Overview the preliminary list of coaching topics
- List up to 5 coaching topics that you would want to work on, in order of preference. The possibilities are open to your judgment, are not limited to the list that is provided, and can be more specific.
- Send the sheet or a picture of it to the main researcher: email adress of researcher.
- Store the sheet safely for our next gathering.

Preliminary list of Coaching Topics

Physiology	Biomechanics
Planning and Periodization	Pedagogy
Psychology	Nutrition
Leadership	Therapy
Kinesiology	Analytics
Technology	Management

Preferred Coaching Topics		
	Coaching Topic	What would you like to learn more about specifically?
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
1.		

Appendix E – Narrative-Collaborative Coaching Guide

Pre-Interview:

- Explain the goal of the meeting and provide an overview of the agenda.

Narrative-Collaborative Coaching

Part 1 : Introduction

1. How have been the last couple of weeks?
2. What happened about _____ (last coaching topic) since we last talked about it?

Part 2: Coaching Conversation on _____ (coaching topic)

These activities are part of a toolbox that the PLC used to invite the coach to reflect, to acquire knowledge, and to act upon the main coaching topic.

- Lead *Strengths-based Reflective Practice* (Ghaye, 2011)
- Provide alternative perspectives
- Expand the reflective process to a critical reflection
- Share scientific information
- Present examples of best practices
- Invite the coach to re-author the current narrative

Part 3: Conclusion

1. What are our action points for the upcoming weeks?
2. What would you like to discuss during our next session?
3. When do you want to meet next?

Post-Interview:

- Chat about family, hobbies, or sports news.

N.B. The interview guide will include modifications and/or new questions during the interview performance as a result of the elements brought up by the participant's answers.

Appendix F – Value Creation Framework Interview Guide

Pre-Interview:

- Informal discussion to cover the latest events with the coach’s team.
- Explain the basis of the interview and provide an overview of the questions.

Part 1: Warm-Up Questions

In *italics>* are reminders of the question’s aim for the interviewer.

Additional bullets represent a bank of questions that may be asked if needed.

1. Warm-up: How is the life in the shoes of (participant’s name) now?
2. The Head: How’s coaching lately?
3. The Heart: What do you like about coaching now?
4. Transition: After the first meeting where we discussed the project of a personal coach, did you have any thoughts or expectations about the project?

Part 2A. Entire Learning Journey Questions

1. Immediate value (experience)	<ul style="list-style-type: none"> ○ What are your overall perceptions of having a personal coach? ○ From your point of view, what did you experience during the year?
2. Potential value (learning)	<ul style="list-style-type: none"> ○ What have you gained from having a personal coach, the project, and the activities? (document <input type="checkbox"/>, learning <input type="checkbox"/>, relationships <input type="checkbox"/>) ○ What potentially useful things did you want to produce from collaborating with the personal coach?
3. Applied value (practice)	<ul style="list-style-type: none"> ○ From what you have learned this year, what have you implemented in your coaching or development? ○ Have you faced any challenges in implementing the ideas or suggestions?
4. Realized value (results)	<ul style="list-style-type: none"> ○ Have you noticed any concrete positive or negative outcomes from your collaboration with a personal coach? ○ What difference has participating with the personal coach made to your ability to achieve what matters to you or other stakeholders?
5. Transformative value (beliefs)	<ul style="list-style-type: none"> ○ How has the project of a personal coach influenced the way you think about your goals and coaching? ○ Has it stimulated deep debates or changed your understanding of what matters?

6. Strategic value (boundary roles)	<ul style="list-style-type: none"> ○ What is your perception of the relationships between the Sports Services, your staff, and your personal coach? ○ What do you think of the VIST role in your daily coaching and where your personal learning coach situates?
7. Enabling value (conditions)	<ul style="list-style-type: none"> ○ Has there anything that the institution could do to continue or improve your experience with a personal coach? ○ What factors might contribute to sustaining a personal coach project?

Part 2B. Coaching Topic Specific Questions

1. Immediate value (experience)	○ From what you can remember, what did we do and what did you experience when we covered this topic?
2. Potential value (learning)	<ul style="list-style-type: none"> ○ What have you learned or what new knowledge did you acquire related to this coaching topic and its activities? ○ Are there any tools, documents, or things that were developed in relation to this topic? ○ Did this topic change some relationships, help you create new relationships, or influence your reputation?
3. Applied value (practice)	<ul style="list-style-type: none"> ○ Have you applied any of these concepts or its content to your coaching? ○ Have your professional or personal relationships changed from your work on this topic?
4. Realized value (results)	<ul style="list-style-type: none"> ○ Have you noticed any concrete positive or negative outcomes from what you learned and applied related to this topic? ○ What difference did the work done on this topic made to your ability to achieve what matters to you or other stakeholders?
5. Transformative value (beliefs)	<ul style="list-style-type: none"> ○ How has this coaching topic and its activities influenced the way you think about your goals and coaching? ○ Has it stimulated deep debates or changed your understanding of what matters?
6. Strategic value (boundary roles)	○ Is there any involvement of vist members from the sports services on this topic?
7. Enabling value (conditions)	○ Is there anything that the institution could do to continue or improve your effectiveness on this topic?

Part 3: Cool Down Questions

- The Head: How do you think the project of a personal coach could be modified to better serve its coaches?
- The Heart: If you had to picture the perfect career for yourself, where would like to be in 10 years and what would you like your biography to say?

- Calm Down: Is there anything that we haven't covered and that you think we should have?

Part 4: Post-Interview

- Say this: "Most coaches appreciated the project, I think you said you did earlier this and I hope you still feel the same thing right now. On that note, I would like to thank you for your contributions, I can tell we share the same passion for _____."
- Maintain silence for 10 seconds
- Ask this: "Would you be open to share the summary of the topics covered during our development sessions to the HPD so that he realizes the extent of work we have done together and knows you are working to improve?"
- Ask this: "If there's anything missing, can I contact you in the upcoming months to get certain precisions on the topics we've covered today?"
- State this: "Thank you for your authentic and genuine participation."

Appendix G – Value Creation Framework Matrix Example

Coach Jennifer

Coaching Topic Matrix

<p>Program and Personnel Management</p> <ul style="list-style-type: none"> • Discussion on your coaching philosophy and leadership triad. • Steps to taking over a program by E. Jones. • Setting effective targets and outcomes as program manager. 	<p>Professional Development</p> <ul style="list-style-type: none"> • Performance of a mock interview for Team CAN. • Underpinning principles of the coach development model. 	<p>Others...</p> <ul style="list-style-type: none"> • ...
<p>Psychological Preparation</p> <ul style="list-style-type: none"> • Discussion on the creation of an effective mental support system. • Establishing a preliminary plan for mental support. • Reflection on the PD Day and Millenials 	<p>Tactical Periodization</p> <ul style="list-style-type: none"> • Access to resources from Eddie Jones. • Steps for the effective implementation of tactical periodization. • Discussion on the application to the Rugby team practices. 	<p>Video Analysis</p> <ul style="list-style-type: none"> • Create a preliminary timeline of effective video analysis. • Identify priorities when conducting video analysis.
<p>Player Development</p> <ul style="list-style-type: none"> • Discuss the implementation of an actual plan for player development. • Sample evaluation scales for grading players' performance of skills. 	<p>Athletes' Deliberate Practice</p> <ul style="list-style-type: none"> • Establish reflective tools and strategies to use with the players during the season. • Discuss the implementation of an actual plan for player development. 	<p>Reflective Practice</p> <ul style="list-style-type: none"> • Presentation on the usefulness of deliberate reflection for PD. • Implementation and use of reflective journal. • Stages of critical reflection.

Appendix H – Consent Form



Université d'Ottawa • University of Ottawa

Faculté des sciences de la santé
École des sciences de l'activité physique

Faculty of Health Sciences
School of Human Kinetics

Co-creation of a personal learning plan for the development of high-performance coaches.

Principal investigators:

François Rodrigue, MA
PhD Candidate)
School of Human Kinetics
University of Ottawa

Pierre Trudel, PhD
Research Supervisor
School of Human Kinetics
University of Ottawa

Invitation to Participate: You are invited to participate in the abovementioned research study conducted by François Rodrigue (PhD Candidate) and Dr. Pierre Trudel of the University of Ottawa.

Purpose of the Study: The purpose of this study is to advance the knowledge of high-performance coach development by examining the implementation of a personalised plan for coaches who aspire to become innovators. Much is known on making coaches competent, but much is missing as to how coaches can progress after their certification. To make the first steps in that direction, I conduct a participatory action research that will develop personalized learning plans for coaches in collaboration with them and their organisations.

Participation: My participation in this research study will consist of participating in a four sequential phases of data collection. Phase 2 where I will perform a narrative interview with the principal investigator and complete an assignment to select coaching topics and learning activities of my preference. Phase 3 where I will participate in a group discussion to determine the learning activities to do and coaching topics to cover during phase 4. The next phase – the execution phase – will ask me to participate in the learning activities, of my choosing, which were designed during Phase 3. Finally, I will participate in a semi-structured interview during phase 5 to debrief my experience of participating in a personalised learning plan.

Potential Benefits and Risks: Participation in this study will lead to benefits for high-performance coaches, national sport organizations, and coaching researchers. The participating high-performance coaches will have the opportunity to participate in an updated, individualized, and theoretically grounded professional development project. My participation in this study will not subject me to any foreseeable risks. In the case that I choose to refuse to participate, or withdraw, my decision will not affect my current standing with my organization as agreed upon by the leaders of your organization beforehand.

Confidentiality and anonymity: The information that I share will remain strictly confidential to the extent I choose in the following options. I understand that all the data and analyses of the data will be kept at the University of Ottawa in both François Rodrigue and Dr. Pierre Trudel's locked offices on password protected computers, and will be kept for ten years beginning once all data has been collected. Only the primary investigators will have access to the raw data. At the end of the ten years all the data will be deleted or destroyed. My transcript will be provided to me for review so that I may ensure the accuracy of the details. At this time, I will be able to make any modifications deemed necessary.

125 rue Université C.P. 450, Succ. A
Ottawa (Ontario) K1N 6N5 Canada

125 University St., P.O. Box 450, Stn A
Ottawa, Ontario K1N 6N5 Canada

(613) 562-5800 • Téléc/Fax: (613) 562-5149

Please, check one of the following options:

- I demand complete anonymity
 - I accept that the name of the organization and my title be made public
 - I accept full identification
 - I accept that the following be made public :
-
-

Publication of Results: The interview details and the results of this study may be published in academic and professional journals, and presented at conferences.

Voluntary Participation: Your participation in this research is voluntary and you are free to withdraw or refuse to answer any questions at any time and without any negative consequences.

If I choose to withdraw from the study, I give my permission for the researchers to analyze the data related to me collected up until that moment.

- Yes
- No

Should I have any questions or concerns regarding the study, the primary investigator or co-supervisors of the study may be contacted. Ethical concerns regarding my participation in the study should be directed to the Protocol Officer for Ethics in Research, University of Ottawa, Tabaret Hall, 550 Cumberland Street, Room 154, Ottawa, ON K1N 6N5, tel.:613-562-5387, email: ethics@uottawa.ca.

I would like to receive the material:

- via e-mail, or
- hard-copy traditional mail

E-mail address: _____ Mailing address: _____

Please note that no additional security measures will be taken during this exchange of information. That is, the material will be exchanged as a regular e-mail attachment or in a regular standard letter mail service through Canada Post.

Two copies of the consent form have been provided, one of which is mine to keep and the other is to be given to the principal investigator.

Acceptance:

I, _____, agree to participate in the above research study conducted by François Rodrigue and Dr. Pierre Trudel, Faculty of Health Sciences, University of Ottawa. I fully understand that by consenting to participate in the study my rights to withdraw at any point are not being affected.

(Participant's signature)

(Date)

Appendix I – Recruitment Letter



Université d'Ottawa • University of Ottawa

Faculté des sciences de la santé
École des sciences de l'activité physique

Faculty of Health Sciences
School of Human Kinetics

Recruitment Letter – High-Performance Coaches

Good morning/afternoon/evening,

My name is François Rodrigue, Doctoral candidate in Human Kinetics at the University of Ottawa. My thesis supervisor, Professor Pierre Trudel, and I are conducting a study on the co-creation of a personal learning plan for the development of high-performance coaches.

The purpose of this study is to advance the knowledge of high-performance coach development by examining the implementation of a personalised plan for coaches who aspire to become innovators. Much is known on making coaches competent, but much is missing as to how coaches can progress after their certification. To make the first steps in that direction, I conduct a participatory action research that will develop personalized learning plans for coaches in collaboration with them and their organisations.

Your participation in this study will consist of four sequential phases of professional development in your preferred language between English or French. In this study, you will be asked to discuss your previous sporting experiences, to envision the future of your coaching career, to develop your own personal learning plan in collaboration with other specialists and your organization, to participate in the activities designed in this learning, and to debrief this experience in an interview.

It is understood that the content of the interviews may be used only for scientific publications and conference presentations. The project is conducted in collaboration with you, your organization, the Coaches Association of Canada, and Dr. Pierre Trudel. The decision to participate or not to participate will not impact your professional relationship with any of the aforementioned parties.

It is also understood that you can withdraw from the project at any time, and you can refuse to answer any question. The level of confidentiality and anonymity that you will have selected when signing the consent form will be respected by the principal investigator. The data collected through the study will be kept in a secure manner in the thesis supervisor's office at the University of Ottawa for a duration of ten years. After which, it will be destroyed. If you have any concern or would like to know more, please contact Dr. Pierre Trudel.

Any information about your rights as a research participant may be addressed to the **Protocol Officer for Ethics in Research**, 550 Cumberland Street, Room 154, K1N 6N5, (613)562-5387, Email: ethics@uottawa.ca

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Appendix J – Ethics Approval

File Number: H08-16-01

Date (mm/dd/yyyy): 09/13/2016



Université d'Ottawa
Bureau d'éthique et d'intégrité de la recherche

University of Ottawa
Office of Research Ethics and Integrity

Ethics Approval Notice Health Sciences and Science REB

Principal Investigator / Supervisor / Co-investigator(s) / Student(s)

<u>First Name</u>	<u>Last Name</u>	<u>Affiliation</u>	<u>Role</u>
Pierre	Trudel	Health Sciences / Human Kinetics	Supervisor
François	Rodrigue	Health Sciences / Human Kinetics	Student Researcher

File Number: H08-16-01

Type of Project: PhD Thesis

Title: Co-creation of a personal learning plan for the development of high-performance coaches.

Approval Date (mm/dd/yyyy)	Expiry Date (mm/dd/yyyy)	Approval Type
09/13/2016	09/12/2017	Approved

Special Conditions / Comments:

N/A

Appendix K – Ethics Renewal

Numéro de dossier: H08-16-01

Date (mm/jj/aaaa): 10/11/2017



Université d'Ottawa **University of Ottawa**
Bureau d'éthique et d'intégrité de la recherche Office of Research Ethics and Integrity

Certificat d'approbation déontologique

CÉR Sciences et science de la santé

Chercheur principal / Superviseur / Co-chercheur(s) / Étudiant(s)

<u>Prénom</u>	<u>Nom de famille</u>	<u>Affiliation</u>	<u>Rôle</u>
Pierre	Trudel	Sciences de la santé / Activité physique	Superviseur
François	Rodrigue	Sciences de la santé / Activité physique	Étudiant-chercheur

Numéro du dossier: H08-16-01

Type du projet: Thèse de doctorat

Titre: Co-creation of a personal learning plan for the development of high-performance coaches.

Date de renouvellement (mm/jj/aaaa)	Date d'expiration (mm/jj/aaaa)	Approbation
09/13/2017	09/12/2017	Renouvellement

Conditions Spéciales / Commentaires:

N/A

Appendix L – Reflective Journal Entries of the PLC

January 16th, 2017

The last 3 days have been very busy but very productive indeed. I already have 4 coaches that have signed their Consent Forms and return them to me. The hockey coaches have hired a coach of coaches to come and help them this week. It's interesting, they seem to be very interested by his hockey knowledge but at the same time, how well is he qualified to be a coach developer? I guess he does not have to be to a certain point. The end point is not if he is qualified or not, it is rather 'does he help the team or doesn't it?'. That will definitely be interesting as the hockey coaches have invited me to attend.

On another note, what's also interesting about the hockey coaches is the script that have shared with me in our first meetings. Just going over the Consent Form (reviewing and signing it), the coaches have shared with me their preoccupations without even mentioning explicitly. For example, Gary has told me about how this Hockey Coach of Coaches is gonna be doing a reflective activity with his players (having both teams at the same time), but that he also heard of players in the past using reflective cards and that after a while players fill them just to get rid of them. The Women's Hockey coach, Eric, has also told me a lot of interesting things. That he already began a masters' in the past with a professor at his former university but that due to multiple reasons he had to drop it. His supervisor seems to lack availability for him. He had a full-time teaching job, and the first kids got on the way. The financial and time burden of having kids put a toll on him and force him to make a decision. He did quit his masters but after 2 years of work... He is currently contemplating the idea of finishing his Masters under the supervision of a professor at his current university. Interesting... Does that kind of work fit within the context of Coach Development? One thing we could do would be to complete an autobiography of some sort... It would be beneficial for his coaching in addition to allow him to complete his masters, I don't know where this professor would fit on this... This, to me, is telling a lot.

- It says that the coach is not very receptive to the use of reflective cards.
- It also tells me that the coach does not want too much work to be added to his plate

I also had very interesting conversations with the women's basketball coaches. I really felt like Francis was all in regarding the research project, but had some skepticism regarding the head coach's interest towards the project. However, as soon as I started to chit-chat about the actual coaching (after reviewing and signing the consent form), the head coach seemed to be very different in his approach? Demeanor? It seems as if the conversation went from a disinterested obligation to a casual conversation between equal peers that share a common interest. It was also very informative. We spend at least 10 minutes on the topic of analytics in women's basketball and how it was used. It is interesting to know that these coaches equipped themselves with Synergy, a software, that makes the breakdown for them; they do not have to do it... which saves a ton of time. Overall, after one week of presentation and PhD in 2017, I went from zero to four signed consent forms and 7 commitments to the research project. Let the game begin with the first narrative interview, tomorrow evening. Should be a good start.

Action Points

- The first development activities with Gary could be focused on time management
- Explore the possibility of helping Eric complete his masters in a conversation with Pierre: Use his research project as a developmental tool for his coaching.
- Explore the analytics software that are available for hockey: Maybe one would offer the breakdown and would allow Coach Gary to have more time.
- Synchronise the reflection with the microcycle of the annual plan

June 6th, 2017

Gratitude: At the moment, I am grateful for ...

Having the opportunity to have a flexible schedule that allows me to play sports, spend time with Daphnée and Arya, in addition to help coaches increase the positive impact they have on Canadian athletes. And man, I should not forget this, having the opportunity to fly to England!

Action Plan: What would make today great? Today would be great if ...

1. Today would be great if I could play ultimate frisbee at a competitive level while being positive.
2. Today would be great if I could help Eric to be more efficient in his work.
3. Today would be great if I could spark coaches in being more long-term oriented.

Social Capital: What was interesting about the people I met? How do they need value?

I met with Eric: It's always interesting about how much he wants to improve and wants to become a better coach. He really needs help for organizing his team and maintaining the cap during the season.

I met with (name of high-school coach): It's very interesting how he doesn't care much how he is perceived, but is really focused on developing his offensive knowledge, football knowledge. He really needs help with buying a house right now and solidifying his credit score.

I met with (name of junior college coach): Interesting character, he is really in a rush to skip the steps but not because he believes he is ready to achieve the next step, rather because he is tired of working multiple jobs and hustling everywhere. I also noticed that he is bit overwhelmed with the 7on7, the coaching, SELOUT, and all else.

Fulfillment: List 3 ways in which you had fun or had an impact on other people today?

1. I had fun coaching with Coach Eric, I learned and it was an open conversation.
2. I had fun watching the show Suits.
3. I had an impact on Nicolas-Gatineau's program by helping them realize the importance of the project.

October 5th, 2017

Gratitude: At the moment, I am grateful for ...

Being a person that is professional and informed and resourceful which allows me to be always overloaded with work; being asked to be involved on so many projects is a testimony of the quality of the work I produce.

Action plan: If I could do only one important/non-urgent thing today, what would it be? Today would be great if ...

Today is great because I completed the Development Session with Francis, I organized questions for the skype meeting with Nadine Dubina, and also because I completed the Safe Contact Development workshop plan. The 4-hour deep work start of the day and then run around completing low-energy, quickies tasks seems to be working well.

Social Capital: What was interesting about the people I met? How do they need value?

In the last 48 hours, I had a conversation with Christine Lacelle on the topic of coaching the U18 team. I also had several conversations with my father-in-law, Jacques Ellyson, in which I learned that he is very similar to me as a professional man; meaning that he is serious and likes to separate work and life. Jacques is very much like me in many ways, perhaps it is the frustrating thing that I very much like deep down. I also had a good conversation with Philippe Lefebvre on the use of BCAAs.

Fulfillment: List 3 ways in which you had fun or had an impact on other people today?

1. I had fun playing Ultimate Frisbee yesterday, it was an unbelievable workout that was competitive and allowed me to practice my coaching.
2. I had fun playing Golf yesterday, I am becoming a much better player.
3. I had a positive impact on the coaching staff at Hormisdas-Gamelin by providing them with a just-in-time session that was inherently collaborative and I also impacted the state of mind of the staff.

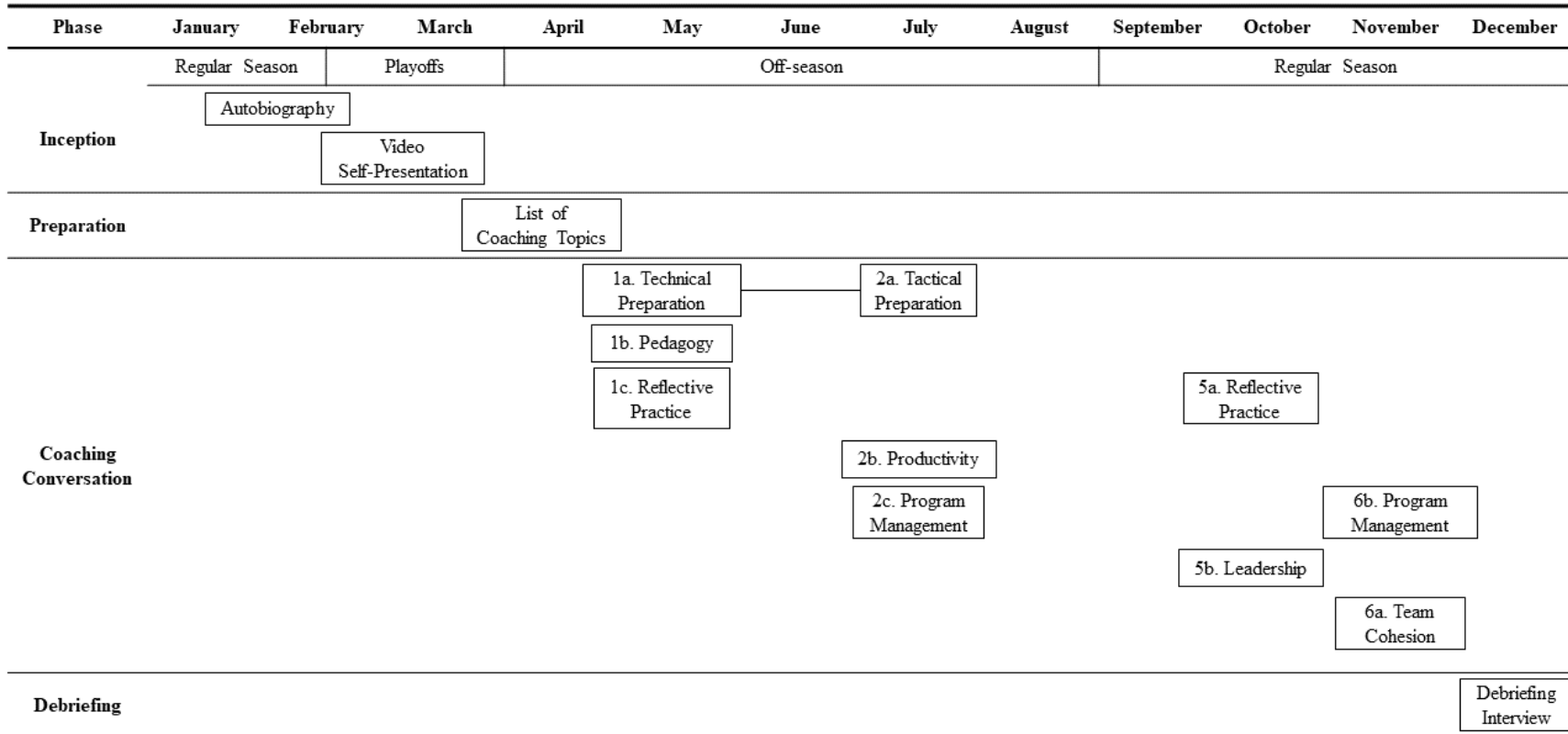
Improvement: If I could improve one thing or repeat one thing from today, what would it be?

If I could improve one thing from the last 48 hours is that I would be much less oriented on myself for the meeting with Gary and his assistant, I would call them beforehand to make sure they understand the nature of the task, and I would provide them with some content/resources related to that.

Appendix M – Learning Journey of Brian

Phase	January	February	March	April	May	June	July	August	September	October	November	December
	Regular Season		Playoffs	Off-season					Regular Season			
Inception		Autobiography										
		Video Self-Presentation										
Preparation				List of Coaching Topics								
					1a. Leadership		2a. Leadership					
					1b. Annual Planning							
					1c. Reflective Practice		2b. Reflective Cards		5a. Reflective Cards			
Coaching Conversation							2c. Productivity					
											6a. Team Cohesion	
Debriefing												Debriefing Interview

Appendix N – Learning Journey of Francis



Appendix O – NCC Coaching Conversation Session Template

1. Introduction (5):

- a) How did the last few weeks go?
- b) What happened related to our last coaching topic(s)?

2. Safe Reflective Space (20):

- a) Strength-based Reflective Practice Framework (Ghaye, 2011)
- b) Reflective cycle (Gibbs, 1988)

3. Narrative-Collaborative Coaching (45):

- a) Alternative perspectives (other views):
- b) Critical reflection (other explanations):
- c) Scientific information (data from Zotero):
- d) Re-authoring (different than last time):

4. Conclusion (10):

- a) Action points for the upcoming weeks:
- b) Topics for our next coaching conversation session:
- c) Date and time of our next session: