

Running head: COACH KNOWLEDGE MANAGEMENT

Coach Knowledge Management: The Needs and Wants of Elite Coaches from African and Small
Island Regions of the Commonwealth

Philippe Patry

Faculty of Health Sciences

School of Human Kinetics

University of Ottawa

Master's Thesis

Submitted to the Faculty of Graduate and Postdoctoral Studies in partial fulfillment of the
requirements for the degree of Master's of Arts in Human Kinetics

© Philippe Patry, Ottawa, Canada, 2016

Acknowledgements

In the spirit of the thirty thousand plus words that make up this thesis, I will focus my acknowledgement on the often short but sweet words of wisdom I received throughout the research process. Countless people were instrumental in the research and the writing of this thesis, including my family, friends, committee, supervisor, participants, and the CGF, but their words are what resonate with me and I would like to share two examples in particular.

Early in the process someone told me “it is like a big bolder. Just keep chipping away at it. Whatever you do, just keep chipping away”. These words kept me looking forward in optimism while I slowly reduced this bolder to dust! The analogy meant a lot and I appreciated knowing every action brought me forward, even if I could not tell in the short-term.

Another individual told me “Don’t try and change the world”. Those words kept me grounded when I over extended myself and tried to make mountains out of molehills. By helping me learn to let the data speak for itself and progress rather than stagnate on specific issues, these few words of advice had a significant impact on the research process. More than I care to admit because who does not want to change the world!

Finally, I want to take this opportunity to thank the administrative and faculty staff from the University of Ottawa who took the time to listen and advise me throughout my studies. My personal and professional lives have improved as a result of my work and education at the University, and the individuals I engaged with there had a significant part to play.

Abstract

Coaching knowledge is an essential resource for improving competition quality. The purpose of this study was to explore the needs and wants of elite coaches from the African and small island regions of the Commonwealth at the 2014 Commonwealth Games in Glasgow, Scotland. Specifically, their development of coaching knowledge and their context was analyzed to understand their needs and wants. Using a knowledge management framework, 19 semi-structured interviews identified the process of combining knowledge as predominant in the development of coaching knowledge within these regions. Tacit knowledge was developed through their social environment, mentorship, and athletic or coaching experience. The need for formal knowledge development opportunities and basic coaching resources were also identified. Finally, technology helped to reduce challenges around accessibility to knowledge, and coach certification programs helped with the transition from athlete to coach.

Keywords: Knowledge management, knowledge type, coach knowledge, coach learning, coach development, Commonwealth Games, Commonwealth Games Federation

Table of Contents

Acknowledgements.....	ii
Abstract.....	iii
List of Appendices.....	v
List of Figures.....	vi
List of Abbreviations.....	vii
Chapter 1: Introduction.....	1
Study Purpose.....	2
Research questions.....	3
The Commonwealth Games.....	3
Chapter 2: Literature Review.....	6
Knowledge Management.....	6
Coach Knowledge Management.....	9
Chapter 3: Study Framework.....	17
Conceptual Framework.....	17
Theoretical Perspective.....	22
Chapter 4: Methodology.....	26
Data Collection.....	27
Sample and Participants.....	28
Interview Guide.....	29
Data Analysis.....	31
Chapter 5: Results.....	34
Section 1: Coach Development.....	34
Section 2: Coaching Context, Needs, and Wants.....	59
Chapter 6: Discussion.....	71
Socialization in coaching.....	72
Externalization in coaching.....	75
Combination in coaching.....	77
Internalization in coaching.....	83
Study Limitations.....	87
Future Research.....	89
Chapter 7: Conclusion.....	91
References.....	94

List of Appendices

Appendix A. University of Ottawa Ethics Approval Notice.....	105
Appendix B. Letter of Information in French and English.....	107
Appendix C. Participant Consent Form in French and English.....	109
Appendix D. Semi-Structured Coach Interview Guide.....	113
Appendix E. Semi-Structured Coach Interview Cards.....	114

List of Figures

Figure 1. Nonaka and Takeuchi's SECI Framework of Knowledge Creation.....	18
Figure 2. Côté and Gilbert's Framework of Coaching Knowledge.....	21
Figure 3. Breakdown of section 1 results.....	35
Figure 3. Breakdown of section 2 results.....	60

List of Abbreviations

KM	Knowledge management
CWG	Commonwealth Games
CGF	Commonwealth Games Federation
IOC	International Olympic Committee

Chapter 1: Introduction

The environment of major sport events is complex, dynamic, and composed of multiple stakeholder groups. Each of these groups has unique needs and wants as they relate to the activities of the property rights holder and organizing committee (Parent, 2008). Successfully balancing and answering to these needs and wants will contribute to successfully delivering the event (Parent, 2008). Among other things, this is a complicated task due to the volume of key stakeholders, both internal (e.g., employees, volunteers, athletes, coaches) and external (e.g., government, communities, media, sponsors, sport federations), and the issue of prioritizing one group's claims over another's (Mitchell, Agle, & Wood, 1997). Hence, sport and event managers are increasingly recognizing the importance of involving their stakeholders in policy development, as a part of a deliberative democratic process (Thibault, Kihl, & Babiak, 2010). This strategy has been utilized to involve athletes in policy development (Thibault et al., 2010). However, despite the significant role of coaches in the success and effectiveness of sport programs (Canadian Sport Policy, 2012), this stakeholder group has yet to be attributed the consideration it deserves (Dawson & Phillips, 2013).

The coach stakeholder can have a significant impact on the performance of the athlete. Improving the athlete's performance and experience can be considered the purpose of their position (Côté & Gilbert, 2009; Horn, 2008). Extensive knowledge is seen as a primary characteristic of effective coaching (Côté & Gilbert, 2009), and is important in their ability to fulfil their purpose. In turn, athletes play a central role in producing the core product of sport: the competition (MacIntosh, 2015; MacIntosh & Nicol, 2012; Parent, Kristiansen, & MacIntosh, 2014). A coach's knowledge is, by virtue of their position and its purpose, important in the delivery of a quality product by the athlete. Accordingly, the property rights holders of sport

competitions have a vested interest in making sure the coaches who attend their events are knowledgeable. A coach's knowledge is an essential resource in their ability to achieve the purpose of their position, which will impact the quality of the property rights holder's core product: the competition (Jasimuddin, 2012; Sveiby, 2001). Improving and leveraging the knowledge of coaches is therefore in the best interest of the property rights holder. This practice can be conceptualized as knowledge management (KM), and has received a substantial amount of attention both in academia and from practitioners (e.g., Alavi & Leidner 2001; Jasimuddin, 2006, 2012; Newman & Conrad, 2000; Nonaka & Konno, 1998; Nonaka & Takeuchi, 1995; Teece, 1998). Newman and Conrad (2000) defined KM as "a discipline that seeks to improve the performance of individuals and organizations by maintaining and leveraging the present and future value of knowledge assets" (p. 1). KM can improve product and service quality (Jasimuddin, 2012) and be beneficial for individuals (e.g., coaches) by facilitating teamwork, networking, and access to expert advice (Goodman, 2007).

Study Purpose

To date, there has been a dearth of research on coaches outside of Western Europe, North America, and Australia. The assumption may be that the needs and wants of coaches within and outside these regions are similar, if not the same. However, research has shown context to be a significant part of the knowledge development process in and outside of coaching (Nonaka & Takeuchi, 1995; Trudel & Gilbert, 2006). Exploring the needs and wants of coaches, especially those outside the above-mentioned regions, is therefore an important step towards improving competition quality and coaching. The purpose of the study was therefore to explore the needs and wants of elite coaches from the African and small island regions of the Commonwealth at a major sport event: the 2014 Commonwealth Games (CWG) in Glasgow, Scotland. More

specifically, their development of coaching knowledge and their respective sport context was analyzed in order to identify and understand these needs and wants. Implications for the coaching literature were considered and framed within the KM literature, keeping in mind the practical implications this had for the management of future Games legacy and policy.

Research questions

Identifying the developmental needs and wants of coaches from the African and small island regions of the Commonwealth will enable the Commonwealth Games Federation (CGF), the property rights holder of the CWG, and other similar organization to maintain and leverage the present and future value of coach knowledge assets. Ultimately, this will help in their attempts to level the playing field and strengthen sporting systems internationally through the development of active, skilled, and qualified coaches (Duffy, North, & Muir 2012; De Bosscher, De Knop, Van Bottenburg, Shibli, & Bingham, 2009). In order to make educated recommendations on how this should be endeavored, understanding the process by which this knowledge is created within the context under study is important.

Therefore, four questions were used to guide this study: (a) How do these coaches develop coaching knowledge? (b) What type of coaching knowledge is derived from each learning opportunity? (c) How is sport and coach development managed in the regions under study? (d) How can sport organizations address the developmental needs of these coaches? To answer these questions, semi-structured interviews were conducted with coaches from the African and small island regions of the Commonwealth at the GWG in Glasgow, Scotland.

The Commonwealth Games

Often referred to as the “Friendly Games”, the CWG are a major multi-sport event held every four years between the Commonwealth nations. The CGF is the property rights holder of

the CWG, not to be confused with the organizing committee of the CWG, which are temporary organizations assigned to hosting one edition of the Games (MacIntosh & Nicol, 2012). The brand of the CGF seeks to promote the interests of athletes participating in the CWG, provide a level playing field, and develop sport within Commonwealth countries, all the while operating under their three core values: humanity, equality, and destiny (CGF, 2008, 2013; MacIntosh, 2015).

The first CWG took place in Hamilton, Canada, in 1930. A total of 11 countries and 400 athletes contested in 6 sports and 59 events. The city of Hamilton provided \$30,000 to help cover travel costs of the visiting nations. This has now evolved to become a gathering of 71 countries, 4929 athletes, 17 sports, and 261 events running on a budget of well over one billion CAD (CGF, 2014; British Broadcasting Corporation, 2014). An important part of the benefits of hosting any Games is the legacy it leaves behind, hence the significant investment (Leopkey & Parent, 2011). In relation to the 2014 CWG in Glasgow, The Coaches and Volunteers legacy program was developed. This particular program was designed for helping the local sport organizations to widen and sustain a higher level of participation through the training and development of coaches, among other stakeholders. From 2008 to 2015, this program assisted in the certification of 20 thousand coaches (The Scottish Government, 2015).

Despite this type of initiative and the CGF being a proponent of a level playing field, some research has revealed the CWG may have experienced a “statistically significant decline in overall competitive balance between 1930 and 2010” (Ramchandani & Wilson, 2014, p. 86), as both the number of nations to win at least one medal and the medal distribution (i.e. market share) among the participant nations decreased significantly (Ramchandani & Wilson, 2014). The core principle behind competitive balance is that increases in inequalities between teams or

athletes in a league or competition adversely affect the welfare of the sport consumer and therefore the revenue of the property rights holder (O'Reilly, Nadeau, & Kaplan, 2011).

Although very little research has explored this in depth for the CWG, it is worth noting in that strategies to maintain or increase the value of their core product should be explored.

Furthermore, the CWG include a wide range of countries that have not been explored in the extant coaching literature. Understanding their needs and wants would help the CGF address issues around competitive balance and improve competition quality at their events.

The following section begins with the analysis of academic papers from the fields of KM and coach development. First, examining the conceptual literature on knowledge, the emerging knowledge dichotomies, and the extant literature on KM in sport helped situate this study within the KM field. Second, scholarly articles on coach development were examined with respects to the current state of this academic field and the key learning situations identified by coaches from other geographic regions. Following this review, the study framework, methodology, results, discussion, and conclusion of this research are presented.

Chapter 2: Literature Review

Knowledge Management

Pun and Nathai-Balkissoon (2011) counted a noteworthy 833 articles published from 1996 to 2009 on KM and organizational learning. Jasimuddin (2006) traced back the roots of the academic field to the 1990's and the origin of the practice itself further back, although subsumed within multiple fields such as information systems, organizational theory, strategic management, and human resource management. As the researcher seeks to understand what the developmental needs and wants of a specific group of coaches are, and what organizations can do to assist in this development, it is fundamental to first understand the concept of knowledge as a personal and organizational entity.

Knowledge and other concepts. The study of human knowledge has been central to questions in philosophy and epistemology since the ancient Greeks, where Plato defined knowledge as a “justified true belief” (Plato, 1953 as cited in Kakabadse, Kakabadse, & Kouzmin, 2003). Yet, the knowledge debate re-emerged in the last century within several fields of inquiry, notably the KM literature (Spender, 1996a, 1996b). Several KM researchers have agreed on defining knowledge as “a justified belief that increases an entity’s capacity for effective action” (Alavi & Leidner 2001, p. 109; Huber 1991; Nonaka 1994). This study therefore used this definition but acknowledges widespread debate endures on how knowledge should be defined or conceptualized.

Several other concepts are closely related to knowledge (e.g., data, information, wisdom) and have been discussed extensively in the literature. Researchers have hierarchized these concepts within their frameworks (Davenport & Prusak, 1998; Kakabadse et al., 2003; Rowley, 2007). However, most of them neglect to consider the possibility that knowledge creation is not a

linear process. Knowledge has also been conceptualized as a state of mind, an object, a process, a condition, and a capability (Alavi & Leidner, 2001). Heisig (2009) demonstrated the fragmented state of knowledge as a concept when he identified 29 dichotomies of knowledge within the KM literature. The purpose of this study was not to unify the current dissociated state of the knowledge literature and, therefore, not all of these fragments were defined or looked further into. Nonetheless, understanding the dispute and why some conceptualizations of knowledge have dominated the literature was important to make educated epistemological and methodological choices.

Emergent knowledge dichotomies. Heisig's (2009) study determined the classification of explicit and tacit knowledge is the most accepted dichotomy of knowledge, figuring within 42 KM frameworks. Following it in popularity was the individual and collective (i.e., organizational) classification, found in 12 KM frameworks (Heisig, 2009). To explain, knowledge is explicit if it is easily written, articulated and codified, while it is tacit if it is hard or impossible to articulate, developed through experience and deepened through problem solving (Polanyi, 1967). For example, navigational directions are most often explicit, as they are easily codified into a map. On the other hand, skill mastery often takes the tacit form, as this type of knowledge is developed through years of experience (Nonaka & Takeuchi, 1995; Polanyi, 1967). Polanyi (1967) referred to tacit knowledge as knowing more than we can say, which makes it of particular interest for KM researchers who consider its rarity and inimitability as a source of competitive advantage (Lubit, 2001; McAdam, Mason, & McCrory, 2007; Nonaka & Takeuchi, 1995; Yin & Er-ming, 2010). This type of knowledge is therefore context specific; it is developed through the interaction of the subject with their environment (e.g., social,

technological, economic, political) and the result of an ongoing negotiation of its meaning (Culver & Trudel, 2008; Nonaka & Takeuchi, 1995).

The latter classification pertains to the knowledge of one single individual in comparison to a group's or an organization's. Walsh and Ungson (1991) suggested six categories where organizational knowledge can be found: individuals (e.g., experiences, observations, beliefs), culture (e.g., stories, language, shared frameworks), transformations (e.g., standardised procedures), structure (e.g., roles, relationships), ecology (e.g., physical structure), and external archives (e.g., external blogs, past employees). The differentiation between individual and collective knowledge is important in order to understand how sport organizations can manage the creation, conservation, and transfer of coach knowledge between these knowing entities (i.e., individuals, groups, organizations).

Knowledge management in sport. The KM discourse began within the field of sport management when Halbwirth and Toohey (2001) conducted a case study on the information system of the Sydney 2000 Olympic Games. Hence, this study explained how the KM program currently employed in Olympic organizing committees has come to exist (Halbwirth & Toohey, 2001). O'Reilly and Knight (2007) explored KM as an important process for the survival and growth of National Sport Organizations. These are typically volunteer-driven organizations and the authors put forth considerations for best practices within this environment. Parent et al. (2013) later examined the theory and practice of KM at the Vancouver 2010 Olympic Games. Their findings emphasized the key role of the individual in KM and transfer within these types of organizations. Finally, Schenk et al. (2015) explored the similarities and differences between the KM and transfer processes of different types of events, from a provincial to an international scale. Their findings highlight the important of knowledge tailoring internally and externally.

Their research also found individuals and their tacit knowledge as important aspects of these processes.

Parent et al. (2013) explained how there are still several questions to be asked, such as what are the roles of the network of stakeholders. They affirmed stakeholder representatives are often present at committee meetings and certain tools can be used for knowledge storage and transfer (e.g., email, technical documents). They, and Schenk et al. (2015), also suggested knowledge should be tailored to the specific stakeholder receiving it, as they need to be able to understand and apply it afterwards. According to previous research however, the coach stakeholder is not represented at these meetings (Dawson & Phillips, 2013). Nevertheless, the acknowledgement of the network of stakeholders, and their needs and wants requiring further consideration in KM theory and practice (Parent et al., 2013; Schenk et al., 2015), supports the need for studies such as this one.

Coach Knowledge Management

KM research in general focuses on internal employee knowledge (Jasimuddin, 2012). Though Parent et al. (2013) and Schenk et al. (2015) extend their consideration to all internal and external stakeholders within a sport context, understanding how this type of organization can leverage knowledge unrelated to their operations, but that has a significant impact on their core product (e.g., coach knowledge), has yet to be studied. To be capable of transferring or tailoring knowledge for a specific stakeholder, and effectively leverage this knowledge for organizational purposes, how the stakeholder typically comes to acquire this knowledge must first be understood. The CGF's mandate (CGF, 2013) and the potential benefits of assisting in the development of coach knowledge (Canadian Sport Policy, 2012), also warrant the research avenue taken within this study. The following therefore helped situate this study within the field

of coaching and identified the significant sources of coach knowledge found in previous research.

Coach knowledge. An overview of the field of coaching by Rangeon et al. (2009), updated from the original by Gilbert and Trudel (2004), produced an annotated bibliography showing 872 research articles have been published on the topic of coaching between 1970 and 2008. Among other subject matters, understanding the coach development process and how coaches learn to coach has been an important part of this research. Similarly to the KM literature, the coaching literature has seen a shift towards the consideration of a non-linear and context specific coach development pathway (Trudel & Gilbert, 2006; Turner, Nelson, & Potrac, 2012). Werthner and Trudel (2009) reaffirm this and suggested elite coaches have idiosyncratic learning paths and their pre-existing knowledge, feelings, and emotions will impact their choice of learning situations. Culver and Trudel (2008) also affirmed we now live in a knowledge-society, where the coach is active in their development, continuously seeking new sources of knowledge.

Coaching knowledge has also been conceptualized in several different ways (Côté & Guilbert, 2009). According to Gray (2011), this lack of a common framework for the specialized knowledge of coaches hampers the extent to which coaching is considered a true profession. Notably, Nash and Collins (2006) used the explicit tacit dichotomy of knowledge. Côté and Gilbert (2009), on the other hand, founded their approach on Collinson's (1996; as cited in Côté & Gilbert, 2009) earlier work in educational theory. They categorised coach knowledge as follows: professional knowledge (e.g., sport technique), interpersonal knowledge (e.g., communication skills), and intrapersonal knowledge (e.g., coaching philosophy). This conceptualization of knowledge is utilized in the International Sport Coaching Framework (International Council for Coaching Excellence [ICCE] & Association of Summer Olympic

International Federations [ASOIF], 2012) and may prove to be applicable to the international context under study. The opportunities coaches typically use to develop this knowledge have therefore been identified within the extant literature.

Past experience as an athlete. The impact an athletic career will have on coaching style and performance has been acknowledged extensively in previous literature (e.g., Dvorak, Valkova, & Belka, 2011; Erickson, Côté, & Fraser-Thomas, 2007; Gilbert, Côté, & Mallett, 2006; Koh, Mallett, & Wang, 2011; Nash & Sproule, 2009; Occhino, Mallett, & Rynne, 2013; Rynne & Mallett, 2012; Werthner & Trudel, 2009). Researchers have suggested “that coaching activity is a continuation of an active sporting career in the given area, and it only confirms a coach’s relationship with sport” (Dvorak et al., 2011, p. 248). Occhino et al. (2013) affirm “the reputation these [elite coaches] had established as players meant that they were able to access more experienced and knowledgeable coaches and/or former teammates when presented with a problem in their early coaching career” (p. 99). A quantitative study by Malete and Sullivan (2009) on coach efficacy indicates the importance attributed to a coach’s athletic career is a phenomenon that may exist in the African region of the Commonwealth (e.g., Botswana). However, the quantitative approach used was based on research conducted in Western regions, and may have been premature to an exploratory approach, which would help develop a better understanding of how this experience contributed to their being more efficacious as coaches.

Formal education. The formal education of elite level coaches has also been analysed in previous literature (Erickson, Bruner, MacDonald, & Côté, 2008; Koh et al., 2011; Werthner & Trudel, 2009). Elite coaches are often well educated and they themselves believe this education was instrumental in their early development as coaches (Erickson et al., 2008; Werthner & Trudel, 2009). Werthner and Trudel (2009) affirmed coaches gain transferable skills through

formal education, even if the discipline they study is not directly related to coaching (e.g., degree in political sciences). Similarly, all of the participants in Rynne and Mallett's (2012) study had post-secondary education, but on only one occasion was this education directly related to coaching. Koh et al. (2011) also demonstrated 66% of the high-performance coaches from Singapore (i.e., country of the Commonwealth) who participated in their study either had a university degree or a college diploma.

Coach certification programs, workshops, clinics, and seminars. Research on coach certification programs, clinics, and seminars has shown mixed results. Some determined they are of little importance in elite coach development (Christensen, 2014; Nash & Sproule, 2009). Some have recognized them as an essential source of knowledge early in a coach's career (Erickson et al., 2008; Werthner & Trudel, 2009) or in continuing career advancement (Wiman, Salmoni, & Hall, 2010), while others have not found evidence of either (Thompson, Bezodis & Jones, 2009; Wilson, Bloom & Harvey, 2010). A quantitative study by Maletje and Sullivan (2009) determined coach certification in the African nation of Botswana (i.e., Commonwealth country) favoured coach technique efficacy, but none of the other three categories (i.e., motivation, game strategy, character building). Moreover, Werthner and Trudel's (2009) study discovered foreign-born coaches also considered coach certification programs as a learning situation, where they were made familiar with the sport and Canadian culture; an interesting finding considering culture is a knowledge bearing entity (Walsh & Ungson, 1991).

Social environment. The social environment of a coach is generally considered to include individuals who will be impactful on their development. This has been explored from multiple angles in the literature. For example, Culver and Trudel (2008) looked into the community of practice of the coach. This particular aspect of the social environment of coaches

is considered to be helpful in providing an opportunity to find solutions through a negotiation of that which is historical and that which is contextual (Culver & Trudel, 2008; Occhino et al., 2013). An individual's family has also been considered as a source of knowledge outside of coaching, in the form of values for example (Knafo, 2003). Callary, Werthner and Trudel (2012) found this sharing of values also occurred within sport. Finally, knowledge or support networks have been explored outside of coaching (Allee, 2003) and within it (Gilbert, Gallimore & Trudel, 2009), and were similarly reported as support mechanism for addressing issues or challenges. A mentor has also been considered as an important part of the coach's social environment, and is considered below.

Mentoring. Research on coach development has often demonstrated the importance of developing coach knowledge through a process of mentoring (Bloom, 2013; Bloom, Durand-Bush, Schinke, & Salmela, 1998; Irwin, Hanton, & Kerwin, 2004; Nash & Sproule, 2009; Werthner & Trudel, 2009). However, the concept has been conceptualized in many different ways throughout the literature, as it is used across multiple fields of inquiry (e.g., business, medical, education; Bloom, 2013). Bloom (2013) suggested mentorship could be understood as a “non-familial and non-romantic relationship between an experienced person and a less experienced person in their field, where the former has more influence and is conscious of it” (p. 447). He goes on to explain the basis of this relationship is trust and respect, as the mentor has a direct influence on the development of the mentee and commits time to assist in his or her personal growth (Bloom, 2013).

A seminal study by Bloom et al. (1998) determined expert Canadian coaches saw mentorship as a continuous process, beginning in their athletic careers and continuing until they themselves would often transition into a mentorship role. The authors reported the knowledge

developed through this relationship extended beyond coaching techniques and tactics, and helped them shape their personal coaching philosophy and style. Occhino et al. (2013) found that, although all of their participants claimed to have benefited from some form of mentorship, the informality and lack of structure of this relationship made it hard for them to actually characterise it as such. Erickson et al. (2008) also found that, while 29.3% of their participants reported mentorship as a source of knowledge, 48.5% affirmed this was/would be an ideal source of knowledge. Hence, Bloom et al. (1998) and Nash and Sproule (2009) affirmed there is “a need for a more formalised mentoring program to allow aspiring coaches with opportunities to acquire hands-on experience and observe mentors during all phases of competition” (Nash & Sproule, 2009, p. 126). Bloom (2013) affirmed countries such as Canada, the UK, and Australia have put the emphasis on, and benefited from, such programs. Others have also suggested a single formal mentor may limit the potential development of coaches (Werthner & Trudel, 2009), thus multiple mentors would be more advantageous.

According to Salmela and Moraes (2003), the importance of formal mentorship programs may be accentuated in the context of developing sport nations, as formalized coach education opportunities may be less accessible. Considering this, it will be important to consider whether these emerging formal programs are perceived preferably, and which direction should be favored by the leaders of the CGF when it comes to coaches from African and small island regions.

Technology. The increased level of access to information through technology (e.g., the Internet, mobile phones, video technology) has been reported to encourage coaches to deliberately seek knowledge on their own time (Nash & Sproule, 2009). This would fall into what Moon (2004) describes as unmediated learning; a process the coach will decide to initiate, choosing when, what, and how they learn. The Internet, for example, was acknowledged to be a

significant asset for lower level coaches to stay informed and develop new ideas on their own time (e.g., practice drills; Wilson et al., 2010; Wright, Trudel, & Culver, 2007). Managing a professional network from a distance at any time of the day is also made possible in this modern technological context (Occhino et al., 2013). Pope et al. (2015) also explored the extent to which coaches use sport psychology resources for their coaching. Results demonstrated the elite level coaches used online resources more than their lower-level counterparts, and that coaches general felt they would use online resources more in the future than they do currently (i.e., from a few times per year to once per month).

Coaching experience. Practical experience is often considered the corner stone of any profession. Callary et al. (2012) suggested coaches would learn extensively from their experience of coaching athletes by going to competitions and improving through trial and error. Nash and Collins (2006) also explore the concept of practical application in the creation of tacit knowledge, and consider coaching expertise or their instincts as the result of this extensive experience. Erickson et al. (2008) affirmed the actual source of knowledge for over 58% of their Canadian participants was through a process of “learning-by-doing”. Nonetheless, this was not identified to be as significant when it came to their preferred source of knowledge.

The gaps within the literature include, first and foremost, the dearth of research on coaches from African or small island countries. Considering the importance attributed to contextual differences in the development of coaches, and the impact this will have on their personal choice or preference of learning situations, researching this group of coaches is well warranted and justifies the need for the present study. The role of sport organizations in managing and leveraging the knowledge of stakeholders who will have an impact on their core product, such as coaches, has also been generally overlooked. Sport organizations are an

important part of the context where coach knowledge is developed, and this is also a gap requiring further research. The emergent conceptualizations of knowledge in KM and the situations where coaches from countries in Western Europe, North America, and Australia learn to coach have been identified. This review was heavily weighted upon in the formulation of the research questions, as the need to discover how these coaches learn to coach in their specific context and understand how sport organizations were involved became evident. It also assisted in the development of a strong conceptual and theoretical framework, and helped the researcher develop the research tool. Finally, it informed the analysis of the findings and the practical recommendations shared further in the study.

Chapter 3: Study Framework

Conceptual Framework

The literature insists the context of the coach will have a significant impact on their choice or preference of learning situations (Werthner & Trudel, 2009). Considering the dearth of research on the context under study, identifying how these coaches learned to coach is therefore essential in order to understand their needs and wants from a developmental perspective. Hence, in order to capture both the type of knowledge specific to coaching and the knowledge typically considered within an organizational setting, two frameworks were utilized: one from the KM literature and one from the coach development literature.

Knowledge management framework. Heisig (2009) analysed 160 KM frameworks for his study. Amongst these, one of the most widely accepted KM frameworks is Nonaka and Takeuchi's (1995) SECI (i.e., socialization, externalization, combination and internalization) framework of knowledge creation (see Figure 1). This framework was founded in the distinction between explicit and tacit knowledge and has proven to be the basis of several others (Pun & Nathai-Balkissoon, 2011). Each component of the SECI framework corresponds to the transfer or creation of knowledge (e.g., socialization; tacit to tacit) between knowing entities (e.g., individuals, groups, organizations). Within the present study, the SECI framework was utilized as the conceptual underpinning of how coaches create knowledge, which the authors suggested will take the form of a knowledge spiral (Nonaka & Konno, 1998; Nonaka & Takeuchi, 1995).

The process of knowledge creation begins with socialization, which is the process of “converting new tacit knowledge through shared experiences in day to day social interactions” (Nonaka & Toyama, 2003, p. 4). Through action and perception within a social setting,

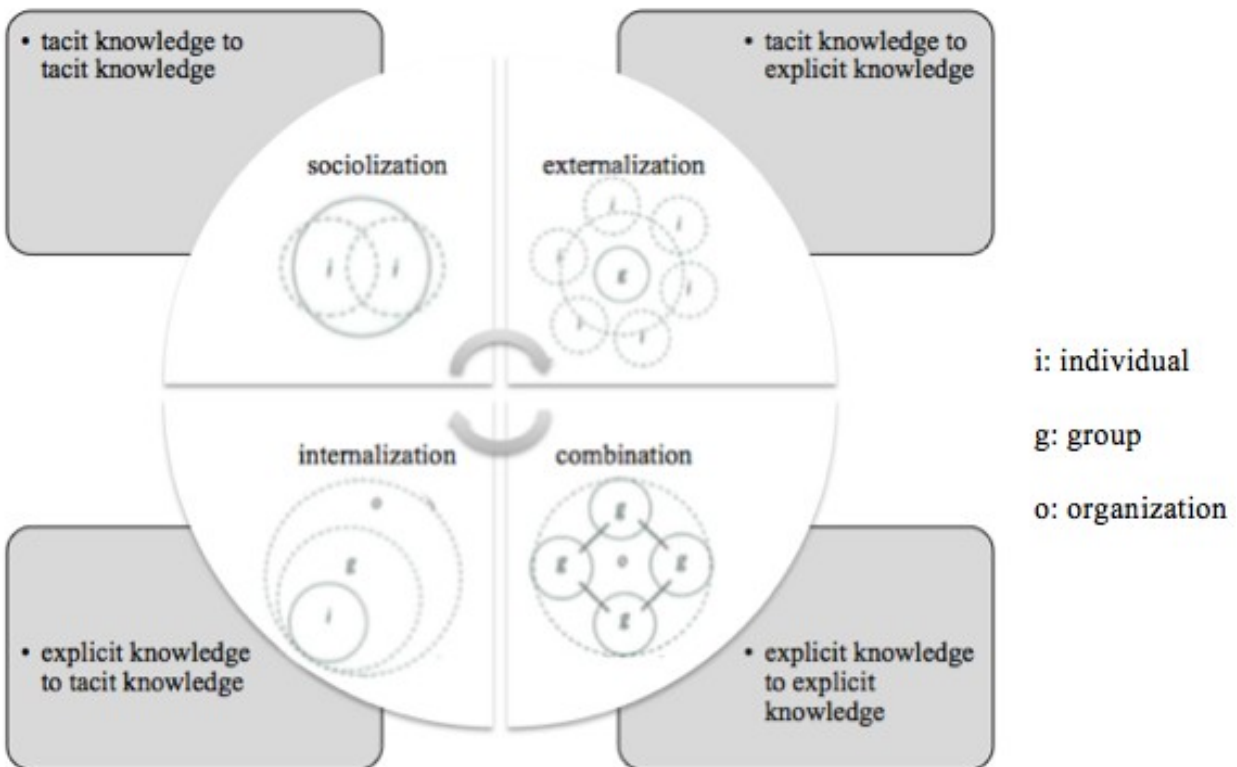


Figure 1. SECI framework of knowledge creation (adapted from Nonaka & Toyama, 2003, p. 5).

individuals therefore absorb new tacit knowledge (Nonaka & Toyama, 2003). Through externalization, tacit knowledge is then made explicit to be shared with others and built upon further (Nonaka & Toyama, 2003). Strategies to achieve this include abduction and retrodution, rather than induction and deduction, by using metaphors, analogies, or models for example (Nonaka & Toyama, 2003). Following this, the combination of explicit knowledge creates more complex and systematic knowledge that can easily be shared among individuals, through technology for example (Nonaka & Toyama, 2003). This process is characterized by the dissection of knowledge, its reorganization, and its rationalization by the individual combining it (Nonaka & Toyama, 2003). Finally, practical application and simulation are a part of the internalization process, which builds upon the combined explicit knowledge through subconscious feedback from the results of the application, and therefore contributes to the

individual's tacit knowledge (Nonaka & Toyama, 2003). Thus, the cycle begins again and the knowledge continues to evolve and improve, ever increasing in breadth as the spiral expands outwards (Nonaka & Konno, 1998; Nonaka & Takeuchi, 1995; Nonaka & Toyama, 2003).

The source of all new knowledge is therefore tacit knowledge, where it would enter into the knowledge creation spiral (Nonaka & Takeuchi, 1995). Gourlay (2006) argued this is not necessarily true and that one could create knowledge within any phase of the SECI framework, through creative writing for example (i.e., combination). Gourlay (2006) also suggested the nature of tacit knowledge would commend that it be considered as a part of all knowledge, and not distinct from it, as the individual reality of the person embodying the knowledge would contribute to their know-how, which cannot be fully externalized and would figure in all of their behaviours or decisions, whether this can be rationalized explicitly or not (Gourlay, 2006).

Tacit knowledge therefore proves to be difficult to identify or isolate within research (Gourlay, 2006). Andersson and Östman (2015) suggested one should focus on the process by which the knowledge was developed rather than the existence of the knowledge itself. Hence, tacit knowledge could be differentiated from explicit knowledge based on whether it was socially constructed or internalized through practical application (i.e., tacit), or shared through any codified means (i.e., explicit) (Nonaka & Takeuchi, 1995; Parent et al., 2013; Polanyi, 1967). Although this approach was utilized within this study, its imperfection was noted. The intention, however, was not to isolate the tacit knowledge from explicit knowledge, but to identify where it may be further developed (i.e., through socialization and internalization), as opposed to other processes, in order to capitalize on opportunities to improve coaching in the regions under study. Hence, by identifying the process by which the knowledge was created, as per the SECI framework, indications of its nature were inferred and considered in the recommendations put

forth. Finally, the second distinction made with regards to knowledge in this framework, is it will either be individual, group, or organizational knowledge (Nonaka & Takeuchi, 1995; Walsh & Ungson, 1991).

Further to the above, the SECI framework was used in this study for the following reasons: (a) it not only considers what kind of knowledge was developed but how it was developed as per some of the current gaps in the coaching literature (Côté & Gilbert, 2009); and (b) it is a cyclical process model of knowledge creation which coincides with the proposition that elite coach knowledge is created in a continuous fashion and not be considered a linear process (Werthner & Trudel, 2009).

Coaching knowledge framework. The second conceptual framework used within this study was Côté and Gilbert's (2009) model of coaches' knowledge (see Figure 2). Three types of knowledge are identified within this model: professional knowledge, interpersonal knowledge, and intrapersonal knowledge. Professional knowledge is a form of specialized knowledge that will assist coaches in their coaching specifically. Côté and Gilbert characterize it as the "how-to version of coaching knowledge" (2009, p. 310) and upheld it includes knowledge of multiple sport sciences, sport-specific knowledge, procedural knowledge, and pedagogical knowledge. Interpersonal knowledge, and its importance, is a result of the nature and environment within which coaches work. Their ability to interact with the athlete and other stakeholders, and their understanding and affinity with working around the social systems governing this reciprocity are part of this interpersonal knowledge (Côté & Gilbert, 2009). Intrapersonal knowledge is the third and final component of this framework. This includes knowledge related to the ability to be

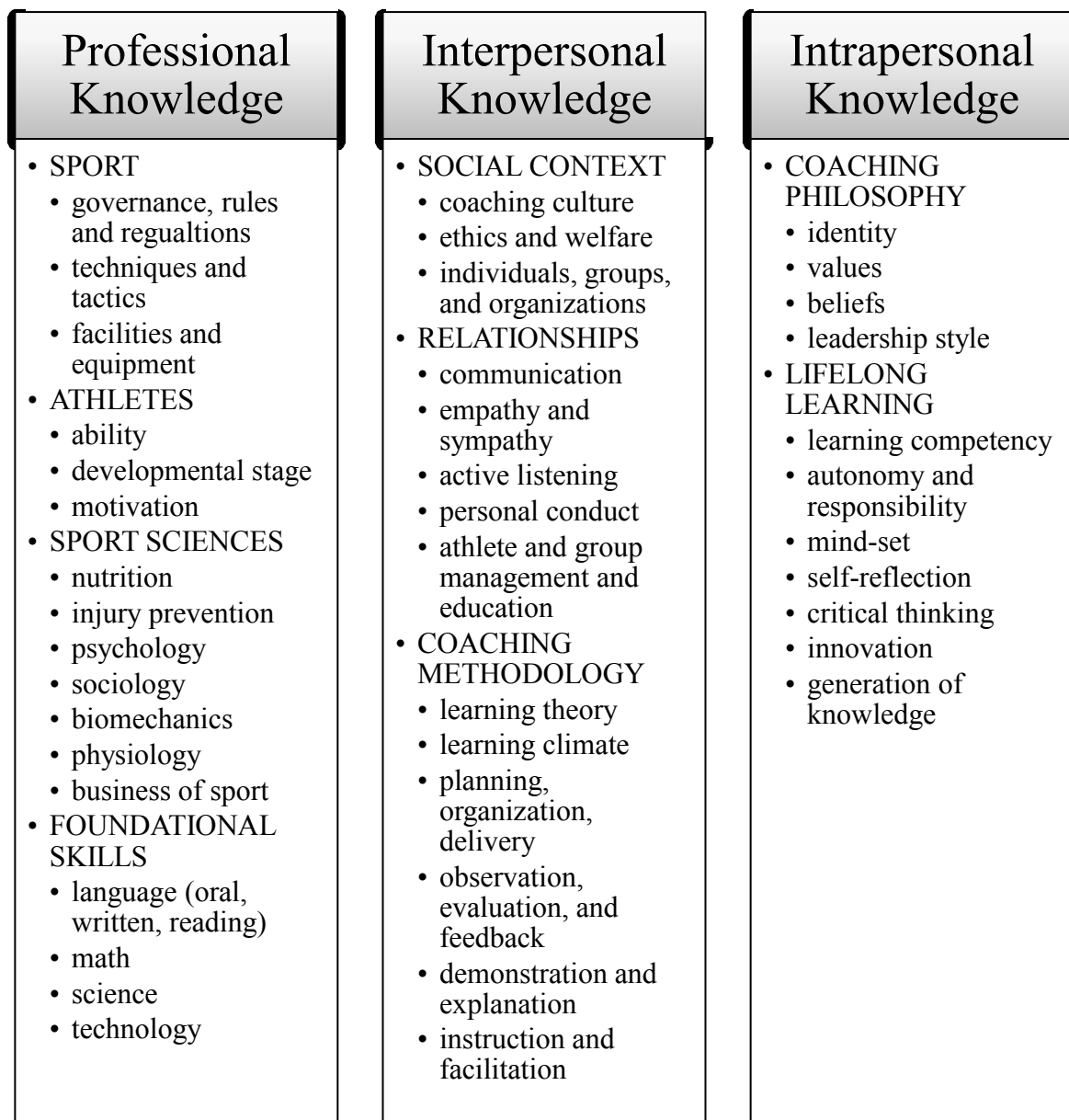


Figure 2. Coaching knowledge framework (adapted from Côté & Gilbert, 2009)

introspective and reflect on one's practice, philosophy, and values, to recognize one's faults and strive to improve. Côté and Gilbert (2009) affirmed very little attention has been brought to studying the development of interpersonal knowledge and intrapersonal knowledge in sport coaching, as most researchers will explore the development of professional knowledge. They

also went on to comment on the extension of this trend to the hiring practices of managers within sport, at all levels. A coach's professional knowledge is at the forefront of their consideration for a position, which may be one of the causes for the high level of turnover in the profession, as these individuals lack the ability to connect with athletes or be introspective and adapt to their situation. The present study was a significant contribution to the coaching literature by considering all three areas of coaching knowledge proposed by Côté and Gilbert (2009), in addition to the process by which it was developed (i.e., SECI), and its origin (i.e., learning situations and groups, individuals, or organizations).

Theoretical Perspective

Within this study, a stakeholder approach was utilized and stakeholder needs and wants were therefore considered drivers for effective decision-making by sport organizations (Freeman, 1984; Jones & Wicks, 1999). A knowledge-based view of the firm was also utilized, and knowledge was therefore considered an essential resource for individual (i.e., coach) and organizational (i.e., sport organization) success (Grant, 1996; Nonaka & Takeuchi, 1995). Bridging the two perspectives was the study's focus on addressing the development of stakeholder knowledge, coaching knowledge specifically, to achieve the organizational objective of levelling the playing field and improving competition quality.

Stakeholder approach. The stakeholder approach is founded in the recognition by organizations that all stakeholders are important, and that managers must develop and act on strategies to manage their needs and wants (Jones & Wicks, 1999). A stakeholder is defined by Freeman as "any group or individual who can affect or is affected by the achievement of the firm's objectives" (1984, p. 25). The evaluation of these relationships and the potential outcomes

of their decisions are therefore central to the stakeholder approach (Jones & Wicks, 1999; Mitchell et al., 1997).

Gutmann and Thompson (2004) affirmed a deliberative democratic approach is effective in managing stakeholder relationship. This would be described as a form of governance in which free and equal stakeholders, and their representatives, justify decisions by giving one another reasons that are mutually acceptable and generally accessible, with the aim of reaching conclusions that are binding in the present on all stakeholders but open to challenge in the future (Gutmann & Thompson, 2004). Such a process will improve the quality and legitimacy of decision (Barnes, Newman, Knops, & Sullivan, 2003) and promote inclusivity (Thibault et al., 2010).

This would therefore require the fair and equal consideration of the needs and wants of coaches, among other stakeholders, to justify policy and other decisions involving them. Thibault et al. (2010) affirmed participants would include all “organizational actors including athletes, coaches, officials, volunteers, managers, [International Federations], and other internal stakeholders” (p. 281). Parent (2008) also suggested a heterogeneity of wants and needs within stakeholder groups may require the examination of sub-groups, which provides basis for the consideration of coaches by geographic region. Although the CGF appoints an athlete representative, there is no such system in place for coaches, which runs contrary to the effective governance principles of a stakeholder approach.

Knowledge-based view of the firm. Grant (1996) noted that theories of the firm are conceptualizations or abstractions of real-world organizations, which explain and predict the structure and behaviour of these organizations. Accordingly, there is no single ubiquitous theory of the firm, and the multiple versions ultimately compete and complement one another in

explaining real-world business decisions and actions (Grant, 1996). A knowledge-based view of the firm upholds the existence of the organization is a result of their ability to produce conditions where individuals can integrate their specific knowledge collaboratively and overcome challenges in achieving this within the general marketplace (Grant, 1996). Indeed, many researchers argued knowledge is the most strategically significant resource of the firm (McAdam et al., 2007; Nonaka & Takeuchi, 1995; Spender, 1996a; Spender, 1996b; Yin & Er-ming, 2010). Knowledge can assist in realizing innovation and improvement of services, processes, and products by individuals and organizations (Nonaka, Toyama, & Nagata, 2000). It is a context-specific, relational, dynamic, and humanistic resource requiring the consideration of complex human interaction (Nonaka et al., 2000).

The most important aspect of this perspective is the capability of the organization to continuously create knowledge, as the exploitation of existing knowledge (i.e., practical application) creates new knowledge (Nonaka et al., 2000). This continuous creation of knowledge is related to a sustainable competitive advantage, where a resource's rarity and inimitability is essential (Grant, 1996). In a knowledge-based view of the firm, tacit knowledge is therefore of particular importance (Nonaka & Takeuchi, 1995; McAdam et al., 2007; Spender, 1996a; Spender, 1996b; Yin & Er-ming, 2010), as effective practical application is often embodied and dependent on the context within which it is applied (Andersson & Östman, 2015; Teece, 1998).

The property rights holder of a major Games therefore exists based on their ability to create conditions where individuals can apply their specialized knowledge (Grant, 1996). These conditions enable the individuals to provide the product of sport competition to the marketplace (Grant, 1996). The organizational structure of the Games property rights holder differs from

typical organizations based on their need for other individuals and organizations to host the competition and participate in it (Grant, 1996). This structure therefore allows for the collaboration and application of specific and specialized knowledge by both external stakeholders (e.g., coaches, sport psychologists, officials, athletes) and internal employees. This helps the organization achieve their purpose of delivering the best possible product (Nonaka & Takeuchi, 1995; Nonaka et al., 2000). By leveraging opportunities to increase the knowledge of these external stakeholders (i.e., the coaches), the organization would therefore contribute to the continuous creation of knowledge, improve product quality, and remain competitive in the process (Nonaka et al., 2000).

Chapter 4: Methodology

This study was a part of a larger project, which used the 2014 Glasgow CWG as the empirical setting. The objective and larger scope of this study was to examine the experiences and perspectives of a few primary stakeholders (e.g., athletes, coaches, technical officials) of this major multi-sport event. Consequently, the research team (i.e., thesis supervisor and Master's thesis student) sought to understand how the stakeholder's experiences and perspectives can inform the decision making of the CGF, who have a devote interest in developing sport and levelling the playing field within Commonwealth countries (CGF, 2008, 2013).

The narrower purpose of this study was to explore the needs and wants of coaches from the African and small island regions of the Commonwealth, focusing on their development of coaching knowledge and their respective context. In addressing this, gaining an understanding of how these coaches learn to coach was fundamental because of the dearth of research on this particular population. Nonetheless, extensive research has been conducted on the topic within other contexts, which provided an opportunity to use a deductive approach during the analysis.

A better understanding of their context and the challenges they face within it was also important in order to understand their needs and wants. To achieve this, a basic qualitative design was utilized. Merriam (2009) affirmed this approach is used to understand how individuals make sense of their world and experiences, and what meaning they assign to them. This was the case here, as the researcher specifically sought the perspective of the coach. This approach is in line with the constructivist epistemology (Merriam, 2009), where the source of meaning is constructed through interaction between the subject and the object (Creswell & Clark, 2007; Crotty, 1998), and this view was therefore utilized in this study.

Data Collection

Ethics approval for the study was obtained on June 9th, 2014 (see Appendix A). The researchers attended the CWG from July 21st to August 1st, 2014. Through a lasting professional relationship between one of the researchers (i.e., thesis supervisor) and the CGF, full access to the 2014 CWG in Glasgow was provided. This agreement included housing accommodations in the Athletes Village and access to coaches. One researcher (i.e., Master's thesis student) collected the data for this study. This was achieved through qualitative semi-structure interviews. As previously mentioned, only coaches from African and small island countries were asked to participate in the semi-structured interviews, as the dearth of research in these areas suggests an exploratory perspective is more appropriate (Yin, 2009). All coaches participating in the Commonwealth Games were, however, asked to participate in the survey portion of this research, which is not covered in the thesis.

The data was collected as of the first full day of the Games (i.e., day after the opening ceremony) until the day after the closing ceremony. Coaches were recruited within the Athletes' Village Dining Hall by the researchers. A desk was provided for the research team, where information on the Games (e.g., brochures) was made available, as per the request of the CGF. A separate and quiet room was made available to the researchers for the purpose of the interviews. When legitimate candidates for the study approached the researchers table, they were provided with a letter of information (see Appendix B). They were then asked if they would like to participate in an interview. If they agreed, the interview was scheduled at their convenience or the participant was taken directly to the interview room where they could review and complete the consent form (see Appendix C). None of the coaches retracted their participation after

reading the letter of information and all of them completed the consent form without any concerns or issues.

Sample and Participants

This study used a purposive sample, as the participants recruited were selected based on the dearth of research conducted on coaches from their geographic regions. The African region was defined as countries within the regional category of Africa, as determined by the CGF (2014). Small island countries were more loosely defined to include a breadth of countries who figure within all regional categories of the CGF (e.g., the Americas, Oceania), but who are isolated from continental mainland and do not figure within the extant coaching literature on knowledge development. Examples of this included St. Helena, Samoa, Papua New Guinea, the Solomon Islands, and several more. When coaches approached the table of the researchers, they were asked for their country of origin and to identify whether they believed their country to have a developed or developing sport system. The selection criteria were simple: (a) they were coaching at the 2014 Glasgow CWG, (b) they were from an African or small island country, and (c) they identified their country as having a developing sport system.

Building from the referrals of previous interviewees, a snowball sampling method was utilized during the Games, as the initial participants suggested other individuals who respect the selection criteria and could contribute to the research (Fortin, 2010). Appointments were set at the convenience of the coach and a CGF volunteer helped with scheduling when the researchers were not on the premises. A total of 21 coaches were recruited: 19 participated and 2 did not attend the scheduled interview (i.e., no shows). These 19 participants coached in nine different sports (i.e., athletics, swimming, judo, cycling, table tennis, badminton, boxing, weightlifting, squash) but 15 different disciplines. For example, five participants coached in the sport of

athletics, but each of them coached a different discipline (i.e., para throws, sprints, pentathlon, marathon, para middle distance runners). Although most of the participants coached an individual sport, there was the exception of those who also coached team events such as the relay (e.g., athletics, swimming) or doubles in racquet sports (squash, badminton, table tennis). Three of the participants coached in para-sport, and 16 in able-bodied sport. A majority of coaches came from the African region of the Commonwealth ($n = 16$) while the remaining three came from small island countries. The average age of the coaches was 42.5, with the youngest being 32 and the oldest 56. The majority were male ($n = 17$). The participants averaged 12.6 years of coaching experience, which varied widely from one to 29 years. Three of the interviews were conducted in French, and the remaining 16 were conducted in English. The researcher reached saturation of the data after 16 interviews. However, this was not the case for female and para-sport coaches. The researcher therefore did not achieve saturation with these specific sample segments.

Interview Guide

A semi-structured interview guide was developed for the study (see Appendix D). This provided the research team the opportunity to guide the conversation, ensure extended discussion and gave the participant the occasion to provide more information on the matter at hand (Rubin & Rubin, 2005). This guide had two sections with additional demographic information being collected prior to beginning the interview: section one pertained to how the participants developed coaching knowledge, and section two to their context and their needs and wants in terms of development.

More specifically, an interview technique was utilized in section one to facilitate sharing. First, each coach was presented with papers face down (see Appendix E). Each paper was

labelled with a learning situation (e.g., mentorship, education) identified within the literature. Second, they were asked to choose a paper and read it. Third, after reading the paper the researcher asked if they understood. If they did not, the researcher briefly defined the concept. Once they understood, or if they already did, the participant either started talking about the learning situation or the researcher took the opportunity to ask if and how this might have helped them develop as a coach. Fourth, probes from the researcher helped manage the direction of the interview. These probes were dependent on the answer of the participant. For example, some of the probes asked for more detail, reaffirmed what the coach had just shared, asked for specifications, asked for examples, or redirected the subject matter to one specific aspect the participant may have mentioned. Notably, probing also assisted in deductively identifying where the participant's response was similar or different with the findings of previous research on coaches from different contexts. The coach was then asked if there were other sources of knowledge that had not been covered but contributed to their coaching development.

Finally, a traditional interview process was utilized in section two. The researcher asked about the sporting context in the participants' country, the resources and opportunities available to them in their development as coaches, and how they believe this could be improved. Similarly to section one, the researcher would then probe based on the participant's response. To conclude the interview, the researcher asked the participant whether they had any additional comments or questions.

The semi-structured interviews took 30 to 45 minutes per participant, which provided the necessary time to go over the guiding questions and any additional comments. Each participant had already signed the consent form, and was attributed anonymity throughout the research process. The researcher executed the semi-structured interviews in both French and English,

which were recorded and transcribed verbatim. The French transcripts were analyzed in French and when quotes were selected they were translated to English. The survey guide was developed by the researchers and then looked over by an expert panel of sport management academics, CGF board members, and ICCE representatives. Adaptations were made according to feedback, and the guide was piloted prior to data collection without the need for modifications.

Data Analysis

As the research team guided participants through the questions, it was anticipated relevant and interrelated topics would emerge throughout the various interviews. Therefore, the opportunity was taken to conduct a thematic analysis on the transcribed interviews using manual first level coding, to divide the data into increasingly concise fragments, and pattern coding, to group the summarized first-level coding into an even smaller number of themes (Miles & Huberman, 1994; Grbich, 2013). Thematic analysis “is a method for identifying, analyzing and reporting patterns (themes) within data. It minimally organizes and describes your data set in (rich) detail” (Braun & Clarke, 2006, p. 79). More specifically, the present study utilizes what Braun and Clarke (2006) would characterize as a “constructivist” (p. 84) and “theoretical” (p. 85) thematic analysis, as the examination of the data was driven by the research teams specific interest in the interaction between the individual and his greater socio-cultural context and how coaches learn to coach. This was done with reference to the conceptual frameworks being utilized (Côté & Gilbert, 2009; Nonaka & Takeuchi, 1995) and with the theoretical lens of the stakeholder approach (Freeman, 1984) and the knowledge-based view of the firm (Nonaka et al., 2000).

All six of Braun and Clarke’s (2006) “Phases of thematic analysis” (p. 87) were utilized. This process was completed in a non-linear fashion, as restructuring occurred throughout the

analysis and creation of the report, and the order of these phases was different in some circumstances. The researcher began becoming familiar with the data (i.e., step one) by conducting the interviews, transcribing the audio files, reading the transcripts over and revisiting and organizing the data. This phase could be considered to have taken place throughout the entire process of analysis, as the researcher was immersed within the data and became increasingly familiar with it as the process evolved. The researcher then generated initial codes (i.e., step two) that were, as mentioned above, generally based on existing theory and the conceptual frameworks. For instance, the knowledge development processes (e.g., socialization, externalization, combination, internalization), the types of knowledge (e.g., tacit knowledge, explicit knowledge), and the types of coaching knowledge (e.g., professional knowledge, interpersonal knowledge, intrapersonal knowledge) were utilized here. Following this, the transcripts were reviewed to identify the emerging themes in the data (i.e., step three); these themes were reviewed (i.e., step four); and the themes were defined and named (i.e., step five). However, naming the theme sometimes came before the review, after which the name may have been changed a few times to better reflect the emerging trends. For example, the use of technology to access multiple sources of written information on techniques relevant to their sport was coded (i.e., explicit, professional knowledge) and the theme was initially named “Developing explicit professional knowledge through technology”. The multiple occurrences of this phenomenon were organized within a word document in the form of quotes, and as the theme was reviewed, the tendency of the participants to amalgamate this information into their own distinct approach (i.e., combination) emerged. The theme was then renamed to “Combining explicit professional knowledge” under the “technology” section. Finally, while producing the

report (i.e., step six), the researcher would often return to previous phases of the analytical process in order to best reflect the themes identified in the writing.

Peer debriefing was utilized here in order to increase the credibility of the findings (Houghton et al., 2013). Discrepancies or similarities in the interpretation of the peer (e.g., thesis supervisor) helped in the analytical process and would sometimes instigate revision or review. Another peer was also consulted for back translation of the selected French quotes to increase the accuracy of the statements. The individual was not a translator but was fluent in Canadian French and English. Member checking was attempted to improve the credibility of the findings (Houghton et al., 2013), but this was not completed. Five of the 19 participants did not have an email address. Among the others who provided an email address, two were invalid (i.e., bounced back). Only one participant came into contact after the researcher sent the transcript for verification. The inquiry was unrelated, and the participant did not follow-up on the topic of member checking after being prompted by the researcher. A thick description of the context was also included within section two of the results, where details of the sport system within their respective countries were provided. Houghton et al. (2013) suggest this will help determine the transferability of the findings.

Chapter 5: Results

The results of this study were organized based on the collection of the data through the semi-structured guide. Section one of the guide explored the participants' knowledge development and section two of the guide explored their context and developmental needs and wants. The results of each section are delivered separately below.

Section 1: Coach Development

The literature on how coaches learn to coach has identified several key learning opportunities (e.g., Culver & Trudel, 2008; Werthner & Trudel, 2009). Through a deductive approach, the impact of these learning opportunities, within the context under study, was explored. The majority of the analysis focused on (a) the type of knowledge (i.e., tacit, explicit, individual, group, organizational [Nonaka & Takeuchi, 1995]; professional, interpersonal, intrapersonal [Côté & Gilbert, 2009]) and (b) the process by which it was developed (i.e., socialization, externalization, combination, internalization [Nonaka & Takeuchi, 1995]). The themes identified for each learning opportunity are a representation of these variables as they emerged within the data (see Figure 3 for section breakdown). Some of the themes are redundant but this was necessary in order to reflect the type of knowledge and the process by which this knowledge was developed through each of these learning opportunities.

Social environment. Within this study, the social environment was defined as any individual or group who the participant considered a part of their society. The participants were asked to focus on those that had an impact on their development as coaches. The social environment the participants reported on included their support network, their community of practice, and other individuals they engaged with as a result of their coaching (i.e., athletes,

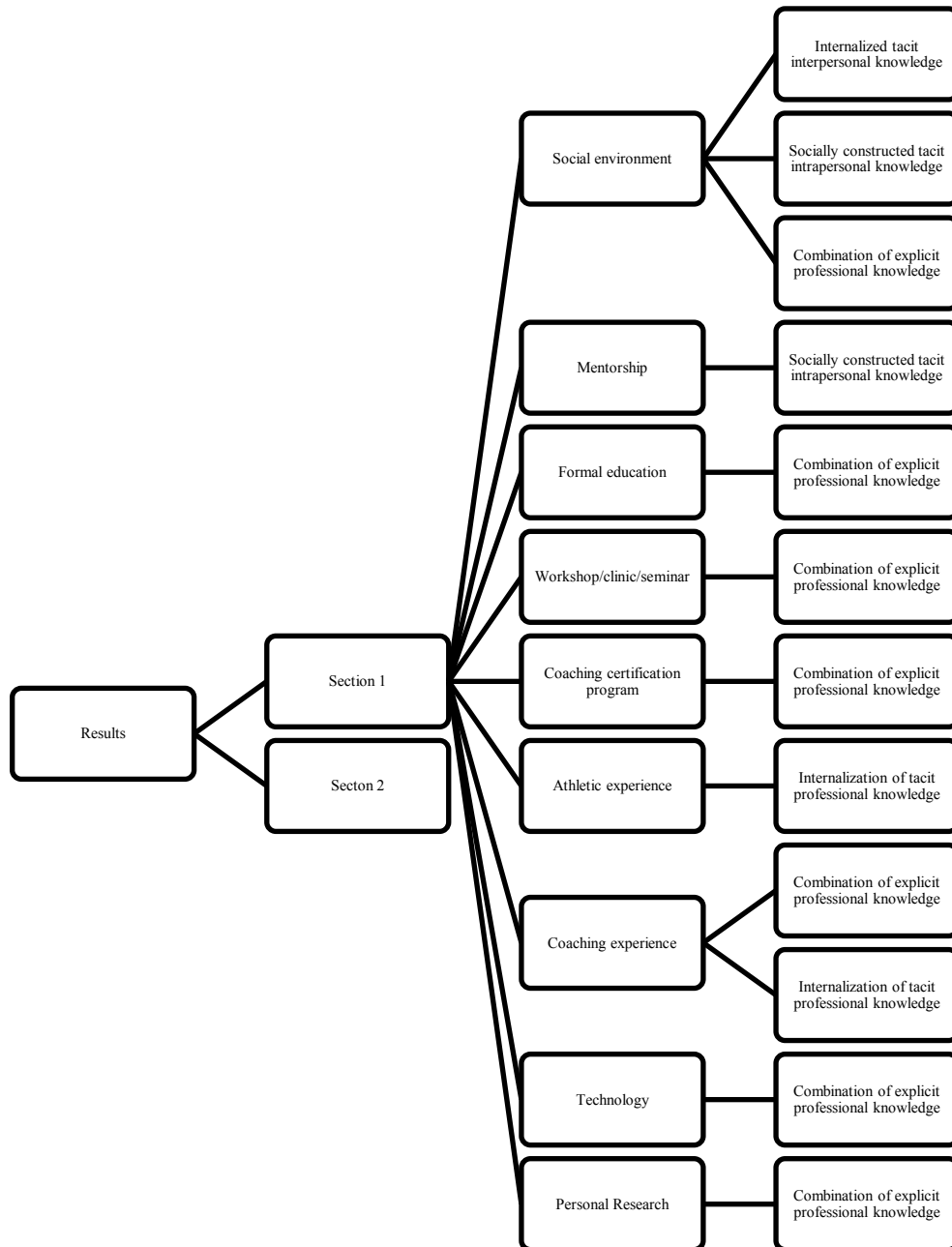


Figure 3

Breakdown of section 1 results: Themes identified for each learning situation

Note. The results chapter (i.e., heading level 1) was divided into two sections (i.e., heading level 2). Section one explored nine learning opportunities (i.e., heading level 3). A total of 12 themes were identified as it relates to the type of knowledge that each learning opportunity contributed to, and the process by which it was created (i.e., heading level 4).

administrators, the athletes' parents). Three themes were identified in the way the participants developed coaching knowledge through their social environment: (a) socially constructed tacit interpersonal knowledge, (b) socially constructed tacit intrapersonal knowledge, and (c) the combination of explicit professional knowledge.

Internalized tacit interpersonal knowledge. The social environment of the participants provided them with the opportunity to apply their existing interpersonal knowledge and augment it. By having been developed through practical application and problem solving, this interpersonal knowledge was developed in the tacit form, but was originally explicit. For instance, individuals within the social environment of the participant were a source of explicit feedback that helped the participant improve their interpersonal knowledge:

Every now and then someone will say, "Hey you know you shout eh". And so because of this I do benefit that way. I try and modify my anger or what ever. I try and control my passion to make sure I can communicate better with my athletes. (Participant-4)

Using this explicit feedback, the participants would try to improve and apply it within their practice, but this was a game of action and reaction, which was not easy to explain explicitly. One participant described how this practice has helped to effectively communicate with parents of athletes:

[I developed] knowledge specific to the methods of coaching in the way one must live with the parents of the kids. If a parent is not in agreement, we cannot work with the kid, so the way you approach them. If a parent says no, how to go about engaging with the parent so they let the kids. So how to interact with them. (Participant-2; translated from French)

The reciprocity existing within the process of interaction provides feedback in the form of behaviour or results. In this case, the parent's behaviour was to deny the athlete participation in the sport. The participant therefore developed the ability to interact with the parent in order to achieve the desired result in the parent's behaviour (i.e., consent). This practical application of interpersonal knowledge (i.e., interaction) within their social environment similarly helped some participants develop their ability to better understand and address the needs of their athletes, as it relates to cultural difference for example: "Because I'm coaching athletes who are from different cultural backgrounds and education levels, I need to understand their culture, their way of thinking and adjust to that. And in this way, the social environment is really, really important" (Participant-11). Interpersonal knowledge can therefore be explicit and tacit, and within the context under study, the social environment of the participants predominantly contributed to the development of tacit interpersonal knowledge through a process of internalization. The social environment of the participants also helped the coaches develop intrapersonal knowledge, which is discussed below.

Socially constructed tacit intrapersonal knowledge. The participants within this study identified their social environment as the source of intrapersonal knowledge, such as their values and coaching philosophy. How this occurs is explained in the following quote: "Where we come from, [in my country], where we do not have a lot of facilities and all that, there is that passion to help other people, so it has also impacted my training" (participant-7). This passion, as it is mentioned here, appears to transcend based on a shared context or reality within a group setting, and would therefore be a social phenomenon, which develops knowledge in the tacit form. Specific individuals within these communal groups seemed to be particularly important in the process of developing this intrapersonal knowledge:

If I have a little bit of money, I don't care, I will spend it on my athletes so that they can be satisfied [...] I would say [I got this] from my parents. Both of them are like that, charitable givers. I am not saying I come from a rich family but naturally, I believe I learned that from them. (Participant-3)

It appeared as though this social construction of knowledge typically took place with people close to them, with whom they spent a significant amount of time. It often took the form of values related to altruism and helping others within the context under study, as demonstrated above. However, individuals who worked in sport proved to be more effective in sharing sport specific knowledge (i.e., professional knowledge), but their relationship with the participants was not always as personal and this resulted in a different process, which will be explained below.

Combination of explicit professional knowledge. Several individuals within the social environment of the participants were identified as a source of professional knowledge. These typically involved other coaches or athletes:

I have a lot of meetings with other coaches, a lot of other athletes, a lot of other instructors, but in a lot of different sports. Because my partner is a sport therapist, I have interacted with boxers, taekwondo. So, there are a lot of things that you can take from watching their sports and how they teach. I mean, the self-discipline in martial arts is immense. It is brilliant for taking that to your own athletes and teaching them how to have a stronger focus for playing in the sport. Boxers, boxer's footwork is fantastic if they are a good boxer. Triathletes, I speak to a lot of triathletes about their training, what is good for them, how they get fitter, when do they eat, when do they not eat. There are a lot of things, which you can take from a lot from these other sports. (Participant-12)

But, it was also reported to include friends who are involved in their sport, as this participant explains:

I have a really huge friendship base in [my country's sport] family. Not all of [my country] but I have a really strong base. Usually, I communicate openly with my friends. I am not ashamed to say, "I do not know this", I am not ashamed to ask "can you assist me with this", because I want to make use of every opportunity I have to enhance my training skills. (Participant-4)

As these quotes demonstrate, this knowledge was most often obtained by communicating with individuals in their social environment, and was explicit. The participants often explored several sources within their social environment, and combined this knowledge as a way of improving their coaching. Hence, the participants of this study identified three types of knowledge that were typically generated from their social environment and had an impact on their development as coaches. A mentor is also a part of this social environment, and will be explored below.

Mentorship. A mentor was defined within this study as a coach with whom the participant had a non-familial and non-romantic relationship. It was an individual who had more coaching experience than the participants, and who had influenced the participant in their own coaching. Of the participants within this study, 17 confirmed they had a mentor or several mentors, the latter being more common. On 12 instances, the mentor was the participant's coach when they competed, or a coach developer (i.e., someone who trains or certifies coaches). The nature of this relationship was almost exclusively informal, in that there was no specific structure to the relationship, it was not organized intentionally but occurred naturally, and was characterized as mentorship based on the personal interpretation of the participant. The

knowledge obtained from these mentors coincided with that of a close relationship within their social environment, which will be explained below.

Socially constructed tacit intrapersonal knowledge. As previously mentioned, several of the participants within this study referred to their coach when asked if they ever had a mentor: "I have one; he was my coach. He is the one who is always behind me. He is a mentor to me" (Participant-18). A mentor was not always the most effective source for current or more scientific professional knowledge; "He is more like an old-school coach" (Participant-19) is how one participant described his mentor. Despite this, these individuals inspired the participants who tried to mirror their style or way of coaching (i.e., intrapersonal knowledge): "He can do everything, so this is somebody that I always admired and look to copy his own style and way of coaching" (Participant-5). This way of coaching was essentially a building block to their personal approach much further into their careers:

When I started working as a coach, I used the same style of work if you will. Afterwards, I refined it a little, I brought some changes to the base, but the method or the approach to my work is the same. (Participant-13; translated from French)

The participants would essentially build their own interpretation of this style through shared activity (i.e., being coached by the mentor as an athlete), as this was not explicitly taught to them but exemplified in the work of the mentor (i.e., shared in the tacit form). Values are another example of the tacit intrapersonal knowledge the participants inherited by being socially engaged with their mentor:

He did not joke around with the notion of ethics and codes of conduct. He was inflexible. So, I received that same specificity that, in some respects, pushes athletes to characterise

me as tuff. But, I can't help it. It's what I inherited from my mentor. (Participant-1; translated from French)

Some of these values focused on their selection of athletes and their behaviour around them:

“One of the things that I have gained from them is that, in selecting athletes you have to be fair to them [...] there is patience. You need to be patient with the athletes” (Participant-7).

Other participants reported on this in more general terms, focusing on philosophical notions their mentor(s) conveyed in their work, which guided them to success in their careers as coaches:

There are things you need to expect. You need to expect success and failure. You need to be prepared for that. You must work hard to make sure you acquire more knowledge so that you can improve your skills. So these are the kind of things that they gave to me. (Participant-9)

These examples refer to style, values, and philosophy as it relates to their coaching development, which make up the intrapersonal knowledge of the participant. The mentor's exhibited behaviour, and that utilized in the participants work thereafter, was founded on a deep understanding and valuation of what the mentor upheld as a coach. This was transferred in the tacit form, as the participants were socially immersed within the work of their mentor, often as their athletes. As mentioned above, the mentors of the participants held this title informally. The following sections will therefore explore more formal learning opportunities.

Formal education. This learning opportunity was described as education in a sanctioned and accredited educational institute (i.e., university, college, secondary school, primary school). Of the 19 interview participants, 12 had post-secondary education (i.e., college or university) and 7 ended their studies after secondary school (i.e., high-school). Four participants were educated in a field directly related to their coaching (e.g., physical education), but generally the

participants studied unrelated topics. This had an impact on the knowledge they developed, and the details will be explained below.

Combination of explicit professional knowledge. Among those who had a post-secondary education, only those who studied physical education determined this had a significant impact on their coaching:

Physical education is a program that is relatively complete. You work on several things like kinesiology, anatomy, etc. So already, because of physical education, you have done a general work you see. So I did work on sport in general, and I did work on [my sport] specifically. There was the option of specializing in [my sport], among about ten disciplines. (Participant-13; translated from French)

These programs were valued for their completeness, providing an opportunity to combine explicit professional knowledge from their readings or lectures, from multiple fields applicable to coaching. This was therefore documented explicit knowledge originating from the academic institution, but was delivered by individuals. The remark below speaks specifically to this process of combination:

The school that I was in was strictly a sports school. So you can imagine, there is basketball, there is football, so you take many ideas from different sports, you know, especially the physical abilities of athletes, how to develop speed, how to develop power, how to develop endurance, how to develop agility. So, those kinds of things, we take those different ideas and put them together. They make me a better coach. (Participant-18)

Developing pedagogical (i.e., professional) knowledge was also a valuable outcome of their formal sport specific schooling: “They already teach us how to educate kids in college, which

means that when we leave the institute, we already started our training and now we simply need to apply it” (Participant-2; translated from French).

However, only a few of the participants studied sport or physical education. The participants who did not have post-secondary education related to coaching (e.g., information technology), or who ended their studies after secondary school, often did not find this had an impact on their development of coaching knowledge. Those who did report it having an impact exemplified foundational skills, which were taught in school at a young age, such as reading, “education of course helped me read and all that” (Participant-10); or using technology, “It has assisted me. That is why, you see, I can do research. I can go on the Internet” (Participant-9). This helped in their ability to absorb knowledge. Learning to learn, if you will, was the impact their early education had on them as coaches: “if you are not educated then it becomes difficult for you to absorb new material and new developments that are coming into your sport” (Participant-7). Other formal sources of coaching knowledge resulted in a similar knowledge development process, and will be discussed below.

Workshops, clinics, and seminars. These learning opportunities were characterized as formal and organized sessions where individuals are gathered together in order to develop knowledge, but which yields no certification, diploma, or degree. Only 10 of the 19 participants reported having ever attended a workshop, clinic, or seminar not related to their coaching certification. This was not a result of disinterest in the opportunity. On the contrary, the participants were very intrigued but were not aware of any having ever taken place in their region. The knowledge shared within these types of formal learning opportunities was generally very specific, shared by an expert, and technical in nature. Hence, it resembled the information

shared within their formal education, but was delivered in a short amount of time and was not nearly as accessible within the context under study.

Combination of explicit professional knowledge. The participants felt the explicit professional knowledge shared in this type of environment was generally very technical (i.e., professional knowledge): “I got knowledge related to injuries for the players. In [my sport] we use the hands, and sometimes they are injured from that” (Participant-14). They often focused on a specific athletic ability such as “footwork drills” (Participant-12) or “acceleration strategies” (Participant-10). One participant shared “there’s always something in there that [you] can take away” (Participant-10), but this “something” was often contingent on the presenter or facilitator: “It all depends on who’s presenting” (Participant-10). The expertise of this individual was therefore important and discussed on several occasions: “what tends to happen is they will have top international athletes there or ex international athletes that will demonstrate. They will take you through the process, any questions you want to ask, you can ask” (Participant-12). The participants therefore combined multiple specific elements these experts shared in order to improve:

You might go to 2 different seminars, and one is by [one university] coach, one is by [another university] coach, and they’re different. Now, what’s left is for me to take what I like from both of them and combine them together and utilize it as mine. (Participant-10)

This process of combination also included their existing knowledge: “It did help because when I was in the clinics I reflected back on what happened back home. Then, putting that into place, sometimes I realise that things are not being done the right way” (Participant-18). The combination of explicit knowledge was also facilitated by other attendees, as some participants identified other individuals who helped in the process, as is explained here: “We interact with the

coaches and the administrators, and we link things together, and that is why it helps that you talk about things” (Participant-6). This would also provide an opportunity to remember what they may have forgotten: “We are all meeting and discussing, reminding ourselves, all the things we had forgotten” (Participant-9). These clinics, workshops, and seminars were therefore an opportunity to reflect on existing explicit professional knowledge within a group setting, or simply to remember it. This existing knowledge was combined to the knowledge being shared in the session. Hence, their new and improved understanding of the issue at hand was considered beneficial to their development. However, several of them never had the opportunity to participate in a workshop, clinic, or seminar. They were often misinterpreted the concept and referred to their certification course, which will be discussed below.

Coach certification programs. The coach certification programs were a resource for coach development all of the participants were familiar with. They were characterized as a process of in-class and/or online training and/or evaluations resulting in a specific coaching certification. The primary providers of coach certification programs within the region under study were the National Olympic Committee or the International Sport Federation. National programs were in most cases available but local expertise was lacking for delivery, which put into question the value of the programs. Of the 19 participants, 16 were certified coaches. Depending on the sport and the country, the level or context of these certifications varied.

Combination of Explicit Professional knowledge. Coach certification programs were reported to help the participants develop basic professional coaching knowledge: “Before I became a certified coach, I didn’t really understand how the coach method goes. But, after becoming a certified coach, I understand some basic things that coaches need to do” (Participant-17). They were reported a being “very green” (Participant-9) before becoming certified.

Knowledge within these programs was explicitly shared through assigned reading for example: “It’s pretty good, ‘cause it’s quite a bit of knowledge, courses are not just like a day class, it’s intense, intense, intense reading, and learning” (Participant-10). At this point in their career though, this type of program may not be sufficient, as this participant points out:

They teach you the basics but they will never teach you the sort of information where you will be able to bring an athlete here [to the CWG]. You know, that takes years and the coach has to have experience to go with that. (Participant-12)

The participants had plenty of training strategies and ideas pulled from their own athletic career, but understanding if, why, and when to use them was something the certification programs often clarified: “Before, with my own training methods before I became a coach, all I knew was since my coach trained me for four hours I would go ahead and train my athletes for four hours” (Participant-17). Certification programs therefore shed light on the methods their coaches used, good or bad, and helped them refine this professional knowledge through the combination of their knowledge on what to do, and this new knowledge of why and when to do it:

I learned a lot here because, when I was a swimmer, we used to just swim up and down and do things like a broken distance, we would do things to improve endurance but I did not know what was the purpose of that type of training. So, when I got the opportunity to attend these clinics and courses, I came to know the importance, the significance of that particular training. (Participant-16)

One participant characterizes this as the differentiation between practice and the theory:

Because, you know, in [my sport] there are games for the practice and for theory. I am a player for [my sport] from previously, so I have practice and I know the practice, how to

do it. But, for theory, I didn't know how to do things. So, from this program, it helped me for many things. (Participant-14)

Ironically the common issue of putting theory into practice in this case was not related to the lack of practice, but the lack of theory itself. The abundance of practice the participants had stemmed from their athletic career, which is examined below.

Athletic experience. The participants in this study were asked whether they had an athletic career prior to their coaching career. All of them confirmed they did. Of the 19, 15 reported having competed in the sport they currently coach. One of the participants was actually coaching the team and competing with them during the Games. The highest level of competition they achieved varied widely. Some had been national or professional-level athletes, and others had only competed in secondary school. Nonetheless, this experience proved effective for most in transitioning to a coaching role. The process by which this took place is explained in the theme below.

Internalization of tacit professional knowledge. The athletic experience of the participants was a vehicle by which they had the opportunity to apply explicit professional knowledge on what to do (e.g., technical skills), and developed a deep understanding of how to do it, and how it feels to do it. Being able to step in their athlete's shoes as a result of their athletic experience is an analogy used by one of the participant:

In most cases I must have gotten some experience similar to what they are having. So if they want to communicate with me it is easier for me to go into their shoes and understand what they are talking about because I have felt it to some level. So, I think the experience in the training, and the sport itself, helps a lot, makes it much easier for you to

communicate, much easier for you to comprehend what your trainee is talking about.

(Participant-4)

As the above quote demonstrate, this empathy stemmed from shared experience and facilitated communication, but the knowledge itself was specific to the sport performance and professional in nature. This was not only helpful for understanding their athletes but also in identifying their state by picking up on non-verbal cues, which facilitated intervention and effective action:

As a coach now, as it relates to my own experience, I happen to notice the reaction of the kids while I train them, the same reactions I used to have. For example, when I have a lactic session, when they have a lactic session, you can throw up, you can't push anymore. I recognize what the athlete feels. But, not to show that they are really tired, I support them so they can get back to work. So, it is good to be a coach when you yourself have practiced because you share their pain, their joy, the same things, with your athlete.

(Participant-2; translated from French)

This understanding was a consistent reference used by the participants and was considered an instrumental aspect of their coaching:

There are times words cannot say the feeling. You only have to feel it. In those cases, I may have felt it somehow so when they start talking I have a flashback and I say, "oh, I think that is what he is feeling". So I think it helps a lot. (Participant-4)

This was truly tacit in that it was hard to explain or put into words. It is almost instinctual, as this participant explains: "it is automatic, we do not realise it but it is there" (Participant-13; translated from French). Taking explicit instructions or information on a technical or tactical task specific to the sport (i.e., professional knowledge), the athlete therefore internalizes this into tacit knowledge through practical application. When they become coaches, they are able to leverage

this knowledge for the purpose of picking up on the non-verbal communication of their athletes, which also facilitated their ability to advise them. The interpersonal component is not developed through athletic experience. It is the understanding of what is communicated, beyond what can be communicated (i.e., tacit knowledge) that is developed. This idea of practical application and experience will continue to be explored within the following section but focusing on the participants' careers as coaches.

Coaching experience. Practical experience within the field of coaching was the general definition used to guide the inquiry around this learning opportunity. Nonetheless, some of the participants shared experiences within their professional careers as physical education teachers, which were not discounted. The participants had an average of 12.6 years of coaching experience, which varied widely from one to 29 years. Relatively speaking, they were elite level coaches within their country, as they were coaching the junior or senior national team at a major Games. Whether they can be characterized as experts is not clear, nor was it explored within this study. The themes identified in their development of coaching knowledge through their experience will be explained below.

Combination of explicit professional knowledge. The participants felt that with their coaching experience came the opportunity to engage meaningfully with other coaches. Events and competition were the main context within which these opportunities took place, as described here:

With mixing with other people at the big events, now I am able to go back after the competitions and talk of what-ever I have built to my athletes. [...] I start equipping myself with better knowledge so that when I go back, I am up to date with what is happening currently. (Participant-6)

Gathering explicit professional knowledge through verbal communication, or tips as the following participant referred to it, was important as several of the coaches at these national or international competitions were considered experts:

When we go to competitions I normally like to interact with other coaches. Others that I feel are better coaches than me. Somehow I develop a better relationship and I benefit from tips from them to improve my coaching skills. (Participant-4)

In addition to other coaches at competitions, the participants also identified trial and error as an essential component of their professional development, which will be discussed below.

Internalization of tacit professional knowledge. The participants of this study often explained how they would put existing knowledge, or the combination of new and existing knowledge, up for trial. The error component then provided an opportunity to analyse and improve: “every failure I have in a competition I look at it and evaluate it and say “this time I will do it this way”. I keep on changing until I get better” (Participant-4). A similarity in some of the responses around trial and error was contextual appropriateness. Their approach was almost scientific, in that each trial seemed to broaden their professional knowledge. The athlete, being central to this contextual appropriateness, most often characterized the scope of their practice and defined the knowledge they developed:

I can tell you that in my 28 years of coaching, I have had different athletes that have passed. These different athletes have allowed me not only to apply techniques from my education, and apply the technique I got from my colleagues, but also with trial and error. In fact, I can take a technique and say “I will try this”, and realise that it is not applicable to my environment, with respects to the age of the athletes, with respects to the receptiveness of the athletes. (Participant-1; translated from French)

They therefore internalized a breadth of professional knowledge and developed their tacit understanding of the context and the athlete. One coach explained how he actually documented this for the purpose of future consideration, which resembles externalization, but this was not a theme among the participants:

I'm picking up knowledge every single day [...] it's recorded in my journals. Next year, we're going to include this, we're going to remove this. It's like a puzzle. I take out here, put in here. If I see it doesn't work, I put things back in again. I have logs "this big" of specific things that I can use, specific things that worked and specific things that did not work. Now, simply because it doesn't work for one, doesn't mean it's not going to work for the other. So that's why everything is still kept. (Participant-10)

The emergence of this theme was mainly a result of discussions with those who had a history of coaching. As such they were able to reflect and consider the process by which they improved through their practical application. Those who reported having a relatively short coaching career provided very little dialogue on the topic. Technology, which will be discussed below, was another learning opportunity the participants could hardly comment on when access was an issue.

Technology in coaching. As the inquiry focused on the impact technology had on their coaching knowledge and development, the participants' interpretation of the concept focused on the Internet, generally speaking, and more specifically the use of search engines, social media, email, and communication apps, which are all connected to the Internet. Devices such as video cameras and external drives were also reported to be useful in their coaching. Considering the nature of technology as a codified source of information (i.e., information technology), the

knowledge depicted from this source was reported as being predominantly explicit. The details of the process and the specific sources of this knowledge will be discussed below.

Combination of explicit professional knowledge. Coaches often felt technology provided an unprecedented level of access to archived explicit knowledge. With this access, the combination of information from multiple online sources, whether they were groups, individuals, or organizations, was achieved with ease and very little time: “I’m reading, but what the heck does it mean? I don’t know what it means so I Google it and it shows me videos. I look at videos and “oh that’s what they’re talking about” (Participant-10). This was seen as a significant asset of the modern technological environment. Several would compare past and present, and speak to the areas having been improved, as demonstrated in the following:

Thank God today’s generation is different than 10 years and 15 years ago when you did not have access to technology, to the Internet, to watching events live. Today you want any information, you can just Google it, and this information is now accessible to us in our country. (Participant-16)

Similarly to the above participant, who refers specifically to the improvements in their country, others upheld the increased access to explicit professional knowledge was especially significant in the environments under study. Coaches did not have access to what they judged as a reasonable amount of professional knowledge through formalized coach education, such as workshops, clinics, and seminars. Hence, they felt modern technology, and how “countries are brought closer together by the Internet” (Participant-1; translated from French), actually gives them the opportunity to access that which would typically have been shared through the above formalized means, as this respondent expresses:

Technology is very important because, in our part of the world, in [my country], we don't have opportunities to go for more international coaching programs or clinics or seminars. We only have opportunities, at least maybe, once in every two or three years. So, technology has helped us to develop more because you can have the opportunity to go to the internet and download, or go to YouTube to see more advanced techniques.

(Participant-5)

This diminution of geographical boundaries was also reported to have improved their access to knowledge bearing goods, which made their coaching more effective. One coach gives the following example: "To show my [athletes] something, I would buy videotapes or CDs online" (Participant-16). Another goes into more depth and speaks to the development of his professional knowledge: "Online, Ben Johnson's coach, before he passed, I bought his book, and I learned about the breathing technique of running, which was something I never knew" (Participant-10). Technology also provided an opportunity to interact with knowledgeable individuals from a distance, such as coaches:

You are able to contact other coaches from other parts of the world, who you are friends with, to send you programs by email that are very useful for you to develop your coaching knowledge. So, technology is very very important. (Participant-5).

Contact with sport organization in order to maintain their professional knowledge (i.e., sport policies, rules, or competition requirements) current was also improved due to the increase flow of information, as this participant explained:

Communication with the national federation, the [National] Olympic committee, the international federation, trying to get information that I need [...] With the Internet,

technology, the social networking, it really works perfect. I get all the stuff that we need and pass it right back to the athletes. (Participant-11)

Once again, communication is facilitated but the interpersonal knowledge of the coach is not developed. Rather, technology had an impact on the professional knowledge shared explicitly through communication.

Although access to explicit professional knowledge is improved with the use of technology, it is dependent on the coach's reality. The following quotation reiterates the above, but introduces challenges faced by some within the context under study, as it relates to accessibility to technology and the Internet:

Without technology, a coach would not succeed sufficiently. He will achieve a certain level but will plateau. Therefore, technology is very very important and is lacking abundantly in [my country]. You know, there is shortage of devices. (Participant-1; translated from French)

It is worth noting that the increased access to information made available on the Internet is dependent on access to, first, the appropriate technological infrastructure, and second, the device used to connect to this infrastructure. The following participant speaks to some of these challenges:

Because of the difficulties of access to Internet back home, we do not use much of the Internet. It costs too much to have good access to the Internet. I use it for administrative reasons more or less, but not too much for research I would say. (Participant-4)

Challenges as they relates to access also extended to the idea of effective inquiry. Above, coaches praised the idea that to find answers one simply needs to "Google it". However, an important distinction should be made between access to a lot of information and access to the

right information. The coaches therefore mentioned the need to be diligent in their process of combination, as demonstrated here:

Sometimes you go through information that will not necessarily be applicable to non-professional athletes that train three or four times per week. So, it is not applicable, and we must be careful of what we take, of what we choose. (Participant-13; translated from French)

Although these challenges are noteworthy, the majority focussed on the benefits of technology, as described above. Seeking professional knowledge was therefore extremely efficient with the use of technology, which also proved to be instrumental in conducting personal research. This offered several points of crossover between both topics, some of which will be discussed below.

Personal research. Personal research was characterized as an unmediated process of developing coach knowledge through research. The means by which the participants of this study conducted personal research fell almost exclusively into three categories: 15 identified the Internet, eight reading books, and seven observing other coaches. By virtue of these methods, the participants predominantly developed explicit professional knowledge through a process of combination.

Combination of explicit professional knowledge. Personal research was perceived as the cornerstone of the participants' strategy to remain competitive. Remaining current in terms of professional knowledge was therefore extremely important to these coaches. This involved research of the sport sciences and coaching methods, but also of competition results: "At the same time I do research on results of competitions. I am always trying to keep myself updated with the changes that are happening" (Participant-11). One participant explains how this helps to prepare and manage expectations:

I even follow the big [events] and other tours which are around the world to see how things are happening and how they are organizing this, how other teams are doing, how the managers are doing, how the coaches are doing. Obviously that helps me when I am telling people what to expect when they are at competitions. (Participant-6)

Rules and regulations are another reason for remaining current through personal research: “I like to know everything that is going on. I will be on the Internet, I will be looking if there are any rule changes” (Participant-12). This was therefore organizational knowledge archived on their websites. Finally, as mentioned in a previous section, this process was truly continuous in that the current inevitably becomes the old, and refreshing their knowledge and understanding around their sport’s landscape was necessary. One participant asserted he is a researcher first, and a coach second for this precise reason:

A coach must first be a researcher. If you are not, what you have learned in school is not enough. You must be on a continuous quest for research [...] Research brings us a lot, because coaching methods change a lot from one moment to the next. If you are not researching, what you learned is in the past. Science is evolving with time and everyone needs to be researching. Otherwise, it is not enough. (Participant-1; translated from French)

A few participants also introduced the idea that personal research is an important part of the process of trial and error, which was identified in their coaching experience. When a trial presented any form of error (e.g., failure), they combined this information to their existing knowledge. Then, they conducted research to find answers (e.g., why they failed), and would conduct a new trial by applying their new and improved knowledge:

I keep on researching. All the time, I keep on researching. Weight loss; someone does not make weight or he makes weight but he is weak. What can be the cause for that? And I keep on researching. I interact with others, I Google, I do what ever that can lead me to the answer. (Participant-18)

Individuals in the form of a “successful other” were most often the subjects of this search for solutions, as the participants sought to understand “What makes Usain Bolt run 9.58 seconds?” (Participant-9). The coaching programs of other coaches from other countries were also mentioned and characterized as this successful other:

You know, I can look at videos of Koreans, the Chinese, world leaders in [my sport]. I can see their coaching techniques and see how I can improve my own. But maybe I am doing something that they are not. But they are the world leaders, so they must be doing something right. So, it is good to just look and see what other countries are doing. (Participant-12)

After observing a variety of styles and methods, coaches often combined this professional knowledge and tailored it to their personal context:

I watch other [athletes] and what they do, and I use it for research, for information [...] Why is Russia so successful in [my sport]? Why is Cuba so successful? I think about those things, there methods of training, and try to take the American methods, take the Russian methods, try to make them into one methods, and make my own method; the African methods. (Participant-18)

Contextual differences do not provide the opportunity for direct transference of the knowledge, hence the importance of combination from multiple sources. Several participants discussed this,

the following being one particular example of a coach who gestured his way through his explanation, demonstrating the puzzle like process:

I am continuously going to see on the Internet what other coaches are doing. Trying to look at it “ok, if I do this, and take this from this. What is this person going to be able to do? Or, take this from this person and add some other thing so he is able to do it”. So, I am able to do that and get a good result from it. (Participant-17)

Personal research was therefore instrumental in developing professional knowledge. Through a process of combination, the participants used personal research as means of troubleshooting and searching for solutions that had previously been successful within other sport programs or for other coaches. The combination of knowledge from multiple sources, such as the Internet and books, helped address gaps caused by contextual differences and was a part of a greater continuous process for remaining competitive.

In summary, the social environment of the participants was the most versatile learning situation, contributing to all three areas of coaching knowledge, and the only learning opportunity that developed the participant’s interpersonal knowledge. Mentorship, which can be considered one or several individuals from the participants’ social environment, was more impactful in the area of intrapersonal knowledge, as the participants developed a coaching philosophy or style with the help of their mentor or mentors. Formal education, coach certification programs, and workshops, clinics, and seminars all contributed similarly to the professional knowledge of the participants. Notably, coaching related education was much more profound in its impact than unrelated education, certification programs were helpful in periods of transition towards coaching, and workshops, clinics, and seminars helped coaches obtain an experts perspective on issues. Both athletic and coaching experience contributed to the

internalization of professional knowledge through practical application, which helped the participants connect with their athletes and make decisions based on passed trial and error. Coaching experience also contributed to the combination of professional knowledge through events and networking. Finally, both technology and personal research, which was often achieved through technology, contributed to the participants' professional knowledge. The increased access to multiple sources of knowledge through technology simplified the research process and made the combination of this knowledge relatively easy.

Nonetheless, the above learning situations were not without their challenges. In some cases, accessibility to that which was being discussed with the participant was scarce or inexistent. In section two of the findings, the contextual similarities of the participants and the needs and wants stemming from this context were explored.

Section 2: Coaching Context, Needs, and Wants

Both the coaching and KM literature suggest context is an important aspect of the learning or knowledge development process. Specifically, a coach's context will impact their choice and preference of learning situation (Werthner & Trudel, 2009). With the general purpose exploring the needs and wants of a specific population of coaches, the first section of the interview guide examined how these coaches learned to coach through multiple learning situations. The second section therefore explored (a) the context of the participants as it relates to their sport system, and (b) their developmental needs and wants. Understanding their context and the challenges they face within this environment shed light on the participants' choice of learning situation and the reasoning that supports the developmental needs and wants they identified. This information will also help with the decision-making of organizations who have a vested interest in improving the sport systems within these regions (e.g., CGF). Common themes within the

context of the participants, and their needs and wants, were identified and will be discussed below (see Figure 4 for section breakdown).

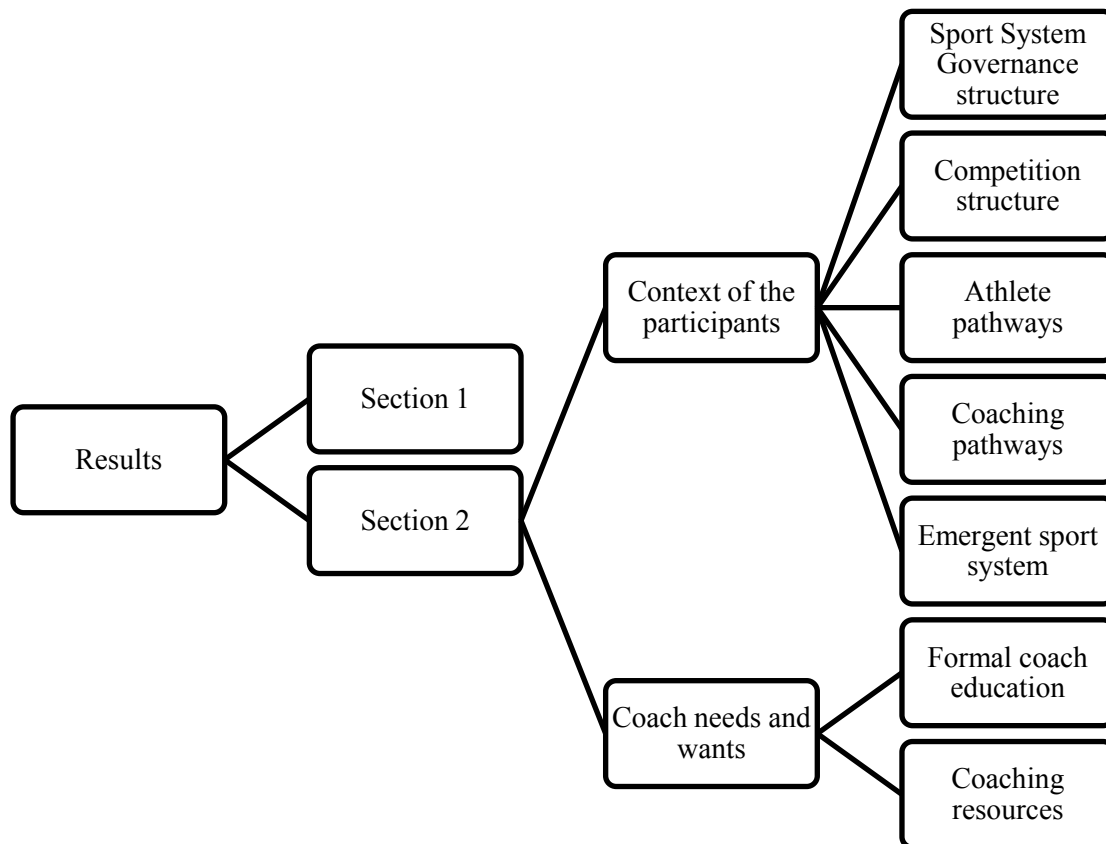


Figure 4

Breakdown of section 2 results: Themes identified in the context of the participants and their needs and wants

Note. The results chapter (i.e., heading level 1) was divided into two sections (i.e., heading level 2). Section two explored the context and the needs and wants of the participants (i.e., heading level 3). A total of seven themes were identified as it relates to the common areas of the participants' sport systems and their developmental needs and wants (i.e., heading level 4).

Context of the participants. The coaches interviewed for this study came from the African and small island regions of the Commonwealth. Each participant was asked to describe their sport context and how it affected their development as a coach. The discussion most often included information on: (a) the organizations who govern and organize sport, (b) the

competitions within which they and their athletes participate, (c) the pathway and status of athlete development, (d) the pathway and status of coach development, and (e) the overall quality of sport within their context. As a general undertone to the conversation, the participants identified several challenges, which tied back into their development within this context. These typically revolved around resources, including funding, facilities, and equipment, examples of which will be found below. Considering the participants came from several different countries and coached within multiple different disciplines, not one context was exactly the same as the next. Nonetheless, clear themes provided a general overview of their coaching environment.

Sport system governance structure. The structure of sport governance within the regions under study typically followed a hierarchy whereas the federal governmental body for sport was at the top and was responsible for managing the allocation of funds to each sport federations. Some coaches stated “the government only supports [sport in their country] for International events like the All-African Games, Commonwealth Games, and the Olympics” (participant-15). Others had an annual funding structure: “annually we have a budget for operating, and it consists of all the expenses, whether it’s for travel, if we want, for example, or program development” (Participant-13; translated from French). Finally, some federations did not get funding from the governmental body for sport within their country. This was rationalized as the prioritization of public funds by the government, and the participants therefore emphasized the need to develop alternative strategies:

The government is looking at development, looking at streets, roads, amenities and all that, they will not look at table tennis, and swimming, and triathlon, and rowing boats alone. So, we need to develop some strategies on how to raise funds to help the sport.
(Participant-7)

Considering they themselves were volunteers and invested time and money into their coaching, sustaining their sport system requires creativity. Especially when it comes to competition, when they require additional funds for travel and accommodations:

[The sport federations] have financial problems. Whenever it comes to African sports in some aspects. Like [my country], where there is not so much funding to get into the sport. So, you have to raise money for tournaments, and you have to be so creative.

(Participant-8)

The International Olympic Committee (IOC), through their respective national Olympic committee, appeared to be the second most influential organization in the sport system of the participants, by virtue of their significant investment: “Basically, we are funded by the [National] Olympic Committee. That is why we are here. If it was not for them, we would not be here” (Participant-18). The remainder of the sport system governance hierarchy changed drastically from one region to the next, from one sport to the next. Some had provincial, county, state, or municipal organizations, while others did not. Para-sport was, on the other hand, managed exclusively by one organization (e.g., National Paralympic Committee) and not by their respective able-bodied sport federations. The role and responsibilities of these organizations, and what they actually achieved according to the participants, was also unique to each country. Nonetheless, some form of sustainability was requested as the participants often affirmed their need to find alternative funding strategies.

Competition structure. Depending on the discipline of the coach, the competitions deemed essential in their development and that of their sport system varied. Generally, this included the Olympic Games and Paralympic Games, Continental Games (e.g., All-African Games), regional Games (e.g., East African Games, Small Island Games), and national

competitions. Ironically, to qualify for the major competitions, the participants needed to have their athletes attend other lower-level competitions. However, funding was only provided for the major competitions. Transportation cost and accommodations were identified as some of the main barriers to their participation in the lower-level competitions, and thus the higher-level competitions. Coaches and sport systems benefit from experience or success at Games such as the CWG, and the participants explained there is a need to consider this challenge of accessibility when selecting host cities:

At continental levels, there are very few countries that go there because it is too far. I used my personal experience as a point. Most of the time I will go to West Africa [for competitions], because I cannot go anywhere outside West Africa in my car. So, if we have a competition, it should be in the center for close proximity countries, so they can move easily. If they cannot afford a [plane] ticket, they must be able to move by car or by road. (Participant-4)

For some of the small island countries, these challenges were generally amplified, as indicated here:

The only way to get just about anywhere is to catch one ship, which goes to South Africa Cape Town. Then you have to fly from Cape Town. That alone takes days, even weeks depending on where you are going. (Participant-12)

The participants therefore felt qualifier events for major competitions need to be more accessible within the region under study. Alternatively, funding should be attributed for the lower-level competitions rather than the major ones. Hosting the competition themselves would also solve this issue of accessibility, but the lack of regulation facilities and equipment made this a logistical nightmare:

In Eastern and Central Africa, you have more than 11 countries. They come to participate in the East Africa Championships, and that is our qualification for the All-African Games. But, no one supports that. We need to find a way ourselves to see how we can find the money to buy something like medals, to find equipment from [another country], just to help us for the competition and then give it back. (Participant-15)

Hence, the participants' needs were not related to the major competition itself. For the most part, their focus was on the lower-level competitions acting as qualifiers for major Games such as the CWG.

Athlete pathways. Although the athlete is not the focus of this study, helping athletes progress and move through the athlete development pathway is the responsibility of the coach. Hence, this is essentially a resource the coach can utilize, and was a part of the context under which the participants operated. Generally speaking, the participants explained athletes were recruited from the school systems, the police force, the military, or the prison staff: "We have institutional systems, like the military, like the police, like the prisons; they have very good athletes" (Participant-9). The physical requirements of their job justified their training schedule, and their employment addressed one of the main challenges of an amateur athletic career: financial remuneration. The concept of developing participation at the grassroots level and mobilizing athletes through a development pathway toward medal performances was theoretically understood by the participants, but practice seldom followed suit. The main gap identified was related to competition, as the athletes would have trouble taking the next step towards the high-performance stage:

Grassroots athletes right now are good up until they get to the senior level. When they get to the senior level, exposure is not there. The level of competition is not there. They

compete among themselves for 10-12 years, so they're familiar with one another. When they step outside of that zone to compete with other countries the timidness comes into play. (Participant-10)

The need for more exposure through competitions outside their specific geographic region, the challenges of which were discussed in the previous section, hindered the ability of the coaches to take their athletes to the next step, towards the high-performance stage. Thus, this may also have limited their coaching experience at this level and their ability to develop athletes and take them through the pathway towards medal performances at major competitions.

Coaching pathways. The participants reported there were often national certification systems in place for coaches to follow, but the administrators in their country lacked the technical expertise to deliver the programs:

We are trying to work on it but it is a bit difficult. We have national training clinics [i.e., certification program] for coaches. But, the problem is that those who are giving the national clinic are not experienced; they do not have the knowledge of [my sport]. So, you can imagine how difficult it is to have someone who does not know anything, teaching people. (Participant-18)

The need for qualified coaches or coach developers was prevalent and often resulted in a discussion around how programs were currently being managed to address these gaps. In any case, the participants acknowledged a clear pathway did not seem to exist outside of these certification programs.

Emergent sport systems. The development of infrastructure was identified by the participants as one of the most significant indicators of progress and of there being better days ahead:

Back when I started [competing] we had cinder tracks, nails probably about 5 or 6 inches long, we really didn't have any weight equipment or anything, we just [competed] off of sheer talent. We had coaches, but they weren't that educated in terms of execution and stuff like that. But over the years things have gotten a whole lot better ... Presently, we have developed a high performance center in [my country]. (Participant 10)

The above quote demonstrates the difficult reality this participant faced as an athlete, and the significant strides since taken by his the sport system. Bringing in external expertise to develop internal human resources was also considered to be instrumental in the emergence of this participant's sport system: "We brought in a couple of Americans to oversee the program in terms of the administrative part, and helped develop programs to develop athletes from the grass-root up to become world class athletes." (Participant-10). Finally, the ability to host a major competition was reported as a catalyst for this type of development, as legacy programs and suitable infrastructure for the competition are often a key component early in the bid process: "the government is pumping in a lot of money for structure development, for the sport that they can identify, for next year. The facilities can then be used for further development for positive plans" (Participant-11). This participant puts the onus on the sport to capitalize on the opportunity before them: "There's some development going on at the moment that is very good, but it is up to each sport to take ownership and make use of what has been put forth, but it is a very big task" (Participant-11). The development of infrastructure was therefore an important part of the emergence of a solid sport system, and the collaboration and increased investment of government during major Games preparation was reported as being a catalyst for achieving this. These observations by the participants demonstrate they recognize avenues through which their sport systems can improve. Considering this, their context, and the challenges stemming from it,

the participants shared what they believe were the most important gaps to be addressed in order for their development of knowledge, and the development of their sport system, to see the most significant improvements.

Coach needs and wants. Within this section, the key challenges faced by the participants within their coaching context were considered. Hence, the participants were given the opportunity to make recommendations and explain their needs and wants, as it relates to the development of their coaching knowledge and the improvement of their sport system. What they felt was missing in their development process, and how certain challenges had an impact on their overall improvement, was often related to their context. Two themes were identified within the explanation of their needs and wants as elite coaches: (a) the need/want for formal coach education and (b) coaching resources.

Formal coach education. The majority of the participants suggested there was a need for formal learning opportunities. Among them, one coach explains, “the most important thing for us, in my country, is to get workshops whereby we can train coaches on the new methods of handling physically challenged athletes” (Participant-17). This need/want for formal coaching education emerged often, but was specific to their context or discipline. Several felt the lower cost of having one expert make the trip to them would be beneficial: “they can’t afford to have people go away to train, so why not get one coach to come to them?” (Participant-12). There were also some who opted to recommend exchange programs or sending coaches aboard for formal learning opportunities:

Carry out some exchange programs. Get a few coaches to another country that is more advanced, and most likely this would be organization to organization or government to government, something like that. Do the exchange programs, getting the videos from the

learning country to the developed country. Give them 3 or 4 months of coaching there, and send them back. They will get so much from everything. And, obviously, you do this four times in a year you will have how many certified coaches. And those who are certified can certify other guys. (Participant-8)

Finally, as another alternative, a few suggested these formal opportunities could take place during or in preparation for the CWG:

You can have them during the Games. If you look at the times, most of the sports they start in the afternoon. Or just pick the time; you could have two sessions so that those who cannot make it in the morning can make it in the evening. And make the coaching forums so that experienced coaching, retired coaching, the veterans can come and share their coaching experiences with us. (Participant-18)

However, all of these alternatives have their own challenges. Strategies could be put into place in order to ensure these initiatives continue to create positive change, and do not become stagnant. For example, one participant speaks of recycling coaches through the certification programs to refresh their knowledge: “you have to do stages of recycling. You have to recycle. Because things evolve and there are new technologies, when before there wasn’t” (Participant-2; translated from French). All of these recommendations were for formal learning opportunities. Coaches also seemed to emphasize experts should deliver this, and that it cannot be a one-off event. Legacy and sustainability were valued and considered indispensable facets of their developmental needs and wants.

Coaching resources. The context of coaches from African and small island countries was affected by financial challenges. The participants emphasised on several occasions the need for funding in order to achieve an optimal version of themselves as coaches. Other resources

discussed on several occasions included facilities, equipment, and computers. It was interesting to hear them draw links in the hierarchy between their own personal needs (e.g., putting food on the table), basic coaching needs (e.g., infrastructure, equipment, time), and professional development needs (e.g., becoming better coaches). For instance, one coach referred to the two latter when explaining the following:

I will always refer to our environment in Africa. When we are sent to a workshop, and you come back, you cannot apply it. I come back with a full head. But, when I go to apply it we do not have the material, so I block. (Participant-2; translated from French).

In this particular case, the lack of resources offset the benefit of developing coaching knowledge, as there was no means for the participant to apply this knowledge with the limited equipment available. Another few participants refer to their personal needs, and their basic coaching needs, as the following describes:

If they have money to live on, they can be consistent in doing what they are doing. If the coaches are volunteers then they will start looking for survival, where to eat, then we can only start to think about the Commonwealth Games. Before that, they will only need to figure out how to survive. (Participant-6)

One of the participants also emphasises that for individuals with a disability, who are at higher risk of unemployment, prioritizing personal needs over coaching needs is often necessary for the coach and the athlete:

They tell me to come to the pool but after that, what do I eat? Most people in [my country] are jobless. Most of us, in fact I think it is 92% of people with disabilities, are jobless, or even more than that. So, you have to plan, like now what I do is I plan three

days in a week. So I asked [the athletes] to sacrifice three days in a week to come to training. (Participant-19)

As a result of this lack of resources, several would simply drop out of the sport, which put the legacy of their programs at stake. This was concerning to some of the participants:

To become a coach is not easy, even in Africa, in my country. Because [sport] does not give you anything, it does not give you money. So, you need to work somewhere. You are busy from working, and you do not have time for training. So no one likes to teach [my sport]. You can't stop to work and teach. (Participant-15)

This issue therefore ties back into the lack of human resources and expertise, the lack of competition, and the need to explore alternative funding strategies:

I think the federation should go out and, I mean you should not always sit down and wait for somebody to come help you, you have to help yourself, so they should go out and look at how they could raise money through fundraising, through sponsorship with corporate organization, because every time you go to the government, your work is going to be very slow. (Participant-7)

The participants of this study therefore provided a breadth of examples as it relates to opportunities for the improvement of their sport system and coach development. The following section will discuss these findings in more detail.

Chapter 6: Discussion

Supporting a level playing field and the development of sport within Commonwealth countries are strategic imperatives that guide the decision-making of the CGF (CGF, 2008, 2013). In order to achieve these effectively, a stakeholder approach suggests sport managers should consider the needs and wants of coaches, as they can impact or be impacted by these decisions (Freeman, 1984). A knowledge-based view of the firm also upholds the knowledge of these coaches is an essential resource that can be leveraged to improve the quality of competition at the CWG (Nonaka et al., 2000). The purpose of this study was therefore to explore the needs and wants of elite coaches from the African and small island regions of the Commonwealth, focusing on the development of coaching knowledge and their respective context.

The participants in this study clearly articulated some of their knowledge development needs and wants have not yet been realized. Although they identified challenges stemming from the contextual realities of their region, they also indicated ways in which these difficulties could possibly be overcome, while highlighting some of the ways in which the property rights holder could help. The process of knowledge development was framed as per Nonaka and Takeuchi's (1995) SECI framework and the findings will therefore be discussed as a part of each step of this process. This approach contributed to coaching theory in considering the process by which coaching knowledge is created (i.e., socialization, externalization, combination, internalization) rather than simply identifying the setting within which this occurred (e.g., mentorship, education, experience). This was also instrumental in the valuation of the coach knowledge assets and their source from an organizational perspective, in that tacit knowledge within a knowledge-based view of the firm is considered of particular importance (Nonaka et al., 2000). The discussion

below was therefore executed in light of the greater purpose and the practical and theoretical implications the results present.

Socialization in coaching

Researchers in the fields of pedagogy (e.g., Bleed, 2001) and coaching (e.g., Nash & Sproule, 2009) have considered the importance of socialization within the learning process generally, and that of expert coaches specifically (i.e., from the UK; Nash & Sproule, 2009). Nonaka and Konno (1998) explained socialization is the sharing of tacit knowledge through joint activities. Throughout this process of socialization, the participants of this study reported having developed their intrapersonal coaching knowledge. This took the form of a coaching style, values, and an underlying coaching philosophy they established by being immersed within their social environment. Specifically, individuals who were close to them, such as their parents or their mentor, had a significant impact on this aspect of their development. The extended amount of time they spent with these individuals provided the opportunity for socialization to occur (Nonaka & Takeuchi, 1995).

The process of socialization has been explored extensively as it relates to values transmission between community, parent, and child outside of sport (Knafo, 2003). Within sport, Callary et al. (2012) also identified a coach's family as a source of intrapersonal knowledge (i.e., coaching philosophy). An interesting finding of this study was that these community or parental values were not necessarily sport related but transcended the personal and professional lives of the coach. For example, the participants upheld the communal or parental value of supporting each other, either socially or financially, within an environment where limited resources may present several barriers. As coaches, they upheld these same values and supported their athletes by driving them to competitions in their personal vehicle or purchasing equipment for them. This

process occurred through both groups (e.g., community) and individuals (e.g., parent) within this study. Nonetheless, the individual remained the key component, or the embodiment of the tacit knowledge, consistent with previous work on KM theory and practice (Andersson & Östman, 2015; Nonaka et al., 2000; Parent et al., 2013). Even if knowledge is common within a group, it is still the individual who develops it and showcases it within the group for others to appropriate and showcase as per their own interpretation. One specific individual involved in this process was the mentor.

Several similarities were found between the participants' mentorship experiences and that of coaches from Canada and the UK (Bloom et al., 1998; Nash & Sproule, 2009); this relationship had an impact on their coaching style, philosophy, and values; it was predominantly informal; and their mentor had often been their coach when they were athletes. Specifically, engaging in joint activities (i.e., being coached) appeared to provide the opportunity for the participants to appropriate the tacit intrapersonal knowledge of their mentor. The nature of this knowledge being tacit is an important contribution to theory and practice in that mentorship has the potential to provide coaches with competitive advantage (Nonaka & Takeuchi, 1995) and should be an important part of the coach development process. This supports the conceptual work of Côté and Gilbert (2009). Capitalizing on a process of mentorship could therefore begin as early as during the athletic career of a coach. Should this be put into place, however, the literature suggests the process should be formalized (Nash & Sproule, 2009; Salmela & Moraes, 2003), which was not the case within the context under study and warrants consideration by the sport organizations investing in coach development. The CGF's access to a significant network of coaches within the Commonwealth puts them in a particular position to address this lack of formal mentorship.

Erickson et al. (2008) argued mentorship is an ideal source of knowledge. Although the participants of the present study did not reaffirm or discount the importance of mentorship, their mentors' lack of professional knowledge appeared to affect the extent to which they weighed upon this source of coaching knowledge at this point in their career. By definition, mentors will typically be more senior individuals in the field (Bloom, 2013). For the most part, the participants of this study were relatively senior themselves. This may explain why they perceived their mentors to lack up-to-date professional knowledge. They might feel they have out-grown their mentor and consider their own professional knowledge to be superior. Bloom et al. (1998) affirmed the mentorship process is often continuous, from their athletic career until the individuals themselves transition to a mentorship role. This may have been the case here, as one participant explicitly mentioned that, when an athlete is injured, they would have them on the sidelines and ask the athlete to observe, provide feedback, and help them run the practice. This therefore defines a particular opportunity to leverage mentorship within the context under study, using these elite coaches as mentors for their own senior athletes for example.

The lack of professional knowledge developed through mentorship, and the participants not currently being involved in such a process, also reaffirms the need to formalize mentorship within these regions. For example, a coach who is lacking knowledge on nutrition (i.e., professional knowledge) could be formally paired with an expert sport nutritionist. Although they are themselves considered a mentor or an expert in the general field of coaching, intentionally targeting an aspect of their knowledge where they may not be experts will provide the opportunity to purposefully fill the gaps, and potentially alleviate the perceived lack of professional knowledge available through this learning opportunity. Finally, this will also help avoid the risk of these senior coaches becoming stagnant at their level of coaching, as the

opportunity to develop relevant tacit knowledge through socialization decreases as they get ahead of the field themselves, and do more sharing than developing.

In sum, the participants of this study considered socialization to be important in developing intrapersonal knowledge. This was achieved by interacting informally with individuals in their social environment including the individuals they considered as mentors. The process of socialization entails that tacit knowledge is being transferred between individuals during joint activity (Nonaka & Takeuchi, 1995). Considering their need or want for additional formal means of coaching education, the participants within this study may appreciate programs that formalize the process of socialization, including mentorships or opportunities to engage purposefully with other individuals.

Externalization in coaching

To be externalized, knowledge is brought from the tacit to the explicit form (Nonaka & Takeuchi, 1995). It is expressed, according to Nonaka and Konno (1998), and translated in a comprehensible form. No common theme emerged within the data as a form of externalization. The participants' use of video or visual aids in their coaching was a situation that may have included the externalization of knowledge, but one that was not pervasive. More specifically, by using video review in their coaching, some of the participants would express their thoughts or knowledge visually for the purpose of translating their tacit knowledge into a comprehensible form. The athletes would be shown their own technique, or the coaching staff would review the video together. In theory, this would facilitate the translation of the coach's tacit professional knowledge into an explicit and comprehensible form for both their own increased understanding and that of the other coaches or the athlete. Not all of the participants had access to technology however, and this may have deterred them from achieving externalization. Another example,

which showed signs of externalization, was the documentation some coaches would develop over their years of experience, in the form of coaching journals. These journals could have been considered their externalized tacit knowledge. However, the coaches seemed to be documenting their explicit knowledge from multiple sources, rather than externalizing their deep understanding of an issue within these documents. Also, very few of the participants actually reported doing this as a part of their knowledge development process.

Notably, the present study focussed on processes by which the coach acquired knowledge on how to coach. Hence, the nature of the process of externalization may not have been explored adequately, as it requires the intent of exposing or sharing their own knowledge to others, rather than the appropriation of it. The lack of formal learning opportunities, where this environment of sharing is created and facilitated, may have had a part to play in the absence of externalization from the knowledge development process of these coaches. This gap in the SECI framework of knowledge creation may be detrimental to the overall development of these coaches and that of their sport system, as it puts limitations on the legacy of the coach. Without the ability or the opportunity to transcend themselves and share their deep tacit understanding of an issue with colleagues or future coaches (Nonaka & Takeuchi, 1995), this knowledge would essentially be exclusive to them. With the exception of sharing tacit knowledge through socialization, this knowledge would therefore leave when they do (e.g., after retirement) and have significant repercussions on the ability of sport programs to remain competitive in the long-term (Nonaka & Takeuchi, 1995; Teece, 1998). This is an important practical implication and future consideration would be beneficial in this area of the coach knowledge development process, within this region.

Combination in coaching

The combination of explicit knowledge was the dominant aspect of the coach development process within this study. It contributed to the development of professional knowledge for the participants, but not to their interpersonal and intrapersonal knowledge. Perhaps this is a result of the relative ease by which explicit knowledge can be shared or codified (Nonaka & Takeuchi, 1995) and the over-emphasis put on professional knowledge within coaching practice (Côté & Gilbert, 2009). This occurred through the participants' social environment, their coaching experience, all formal learning opportunities (e.g., workshops, clinics, seminars, coach certification programs, formal education), personal research, and technology. Hence, these findings contribute to the conceptual work of Nonaka and Takeuchi (1995) by suggesting there should be strategies put in place to manage the knowledge available within this particular part of the SECI framework. Specifically, the modern technological landscape can provide an excess of information and may create clutter and detract from that which is most important to the coach's work.

Within their social environment, the participants identified specific groups within which they engaged regularly as a result of their involvement in sport. This predominantly consisted of coaches but also included athletes. These groups were characterized as communities of practice, which have been acknowledged as helpful in the Australian context (Occhino et al., 2013). The coaches in this study similarly described their interaction to have assisted them in the development of professional knowledge (e.g., technical or tactical knowledge; Côté & Gilbert, 2009) for addressing challenges or improving their practice. Culver and Trudel (2008) explained, in a community of practice, meaning (e.g., a solution to a problem) is negotiated through the ongoing interaction of that which is historical and that which is contextual (e.g. discussions

around past personal coaching experiences). They affirmed this interaction “involves both explicit, or codified knowledge; and tacit, or unarticulated knowledge” (Culver & Trudel, 2008, p. 3).

Evidence of the above did appear within this study. The social environment of the participants, and their community of practice specifically, helped them develop their professional knowledge. They achieved this by combining the knowledge explicitly shared with them, which had been developed through the personal experiences and the context (e.g., sport, country) of the individual who was sharing it. Nonetheless, this knowledge did not take the tacit form, which may be detrimental to the overall competitiveness of these coaches and their sport systems (Nonaka et al., 2000). Their engagement with this community of practice was informal and appeared to lack the level of prolonged engagement, problem solving, and shared activity necessary in order to achieve this (Nonaka & Takeuchi, 1995). Had their community of practice been formally and proactively brought together in order to address the challenges they face, opportunities may have occurred for these coaches to develop tacit knowledge through socialization, or for other coaches to externalize their tacit knowledge, making it available to multiple coaches and not just held by one (Nonaka & Takeuchi, 1995). This was essentially reflected in the needs and wants of the participants, as coaches repetitively requested formal learning opportunities. The majority of their current development was unmediated or resulting from experience as an athlete for example. The need for formal intentional learning was therefore evident, which may explain this relatively superficial learning achieved through the communities of practice of the participants.

When discussing coaching experience, the participants reported their ability to network at competitions or during training camps. This was another source of explicit knowledge they used

in their process of combination. However, these relationships did not fit within the scope of mentorship, as there was no prolonged time commitment by the individuals to assist in the participant's personal and professional development (Bloom, 2013). They also did not fit within the scope of a community of practice, as there was no process of negotiating meaning through ongoing interaction (Culver & Trudel, 2008). Instead, the participants identified their particular interest in engaging with those they perceived as expert, but the relationship or interaction with these individuals was opportunistic and relatively one sided (e.g., tips, opinions, short-term advice). Allee (2003) described this as an informal knowledge network, which is construed of loose and informal relationships that do not persist due to their lack of joint enterprise (e.g., working towards a common goal) and shared tools (e.g., values or philosophy).

Without access to this expertise within their immediate sport environment, the participants are reaching outwards in order to access professional knowledge they consider as being novel. Implementing formal opportunities to engage with experts and develop a depth of understanding would reinforce the other steps of the knowledge development process and would therefore be beneficial within this context. Specifically, meaningful engagement can involve a process of socialization, which would develop valuably tacit knowledge (Nonaka & Takeuchi, 1995). The participants identified competition as an opportunity to achieve this, and the CGF, in overseeing the management of the CWG, would therefore be in a particularly good position to address this challenge. The opportunity to formally engage with individuals at the CWG is something the participants clearly mentioned they would be interested in when discussing their needs and wants.

Workshops, clinics, and seminars were not a common source of knowledge for these coaches. They demonstrated interest but nearly half of the participants were unaware of any

having ever been available within a reasonable distance of where they lived. Those who had previously attended one generally did so outside the geographic area under study. These participants believed they could benefit from such activities and build professional knowledge, particularly technical knowledge, when information was delivered from an expert. Having access to experts through workshops was discussed as a benefit in Werthner and Trudel's (2009) study but their participants were reporting on the individuals delivering coach certification programs. The experts the participants of this study had access to here were typically the keynote speakers or the hosts of the workshops, which were non-certification related, took place outside their country, and generally included a single session. Consequently, the participants felt attending several of them and combining knowledge on the specific technical concepts relevant to them was beneficial but costly. The feasibility of having coaches attend these was hardly resource appropriate or sustainable.

Furthermore, the participants of this study also identified there was a lack of internal expertise for delivering their national certification programs. Nonetheless, the IOC or their sport's international federation delivered international certification programs within their country on occasion, and the participants generally felt they were beneficial, unlike some of what has previously been reported (Nash & Sproule, 2009; Christensen, 2014). The coaches who did not have the opportunity to attend non-certification related workshops were the ones who reported this resource as being most beneficial to their development. The majority of the participants were, however, consistent in identifying the foundational role these programs held early in their coaching career (Erickson et al., 2008; Werthner & Trudel, 2009). Maleté and Sullivan's (2009) study on coaches from Botswana suggested these programs are only helpful in developing technical efficacy (i.e., a result of professional knowledge), which this study's findings support.

Previous research has recognized coach certification programs as valuable in developing basic professional knowledge, or for ongoing professional development (Erickson et al., 2008; Werthner & Trudel, 2009). A noteworthy observation made within this study, which went beyond the above, was the role coach certification programs played in the participants' transition from athlete to coach. The combination of practice and subsequently theory was helpful in alleviating any gaps in their professional knowledge. Considering this, facilitating athlete participation in coach certification programs could be extremely beneficial. This might alleviate transitional stresses at the end of an athletic career, prepare them for a career in coaching, and allow these countries to harness the sport specific knowledge of these athletes. By enhancing the development of competent and skilled coaches over the long-term, this would ultimately benefit the sport systems within these regions and support policy at the CGF, for example.

Formal education within a recognized educational institute was considered of minimal value to the participants, with the exception of those who completed a program in a field related to coaching (i.e., physical education). In these programs, the participants combined a broad range of explicit professional coaching knowledge, while those who completed an unrelated program or ended their studies after secondary school developed foundational skills such as reading and writing, which are also considered professional knowledge (see Figure 2). This was similar to Werthner and Trudel's (2009) study where a participant discussed ethics and leadership as having been developed through their education.

The participants of this study often upheld there is no money to be made in sport and putting food on the table came first for them. Their coaching therefore came second and balancing their work-sport life was challenging at times. Formal schooling can be considered to be a preparation of the individual for a profession, or their future life's work. Of the participants,

the few who completed studies in the field of sport supports the idea that coaching was not a viable profession or career path for them. They are significantly engaged but as volunteers for the most part. This ties in questions about the professionalization of coaching being in its infancy within the region under study. Coaching was not socially perceived as a profession and was therefore not pursued academically through formal education (Gray, 2011). Nonetheless, their passion for coaching remained, and they clearly identified their need and want of formal education and developmental opportunities in coaching. Scholarships were an example of a resource they would value in that it would counter the lack of return on investment they would incur if they paid for their education.

Informal and unmediated knowledge development opportunities were very common and one of the most popular ways by which these coaches looked to develop their professional knowledge. Moon (2004) described unmediated learning as a process the coach will decide to initiate, choosing when, what, and how they learn. The unmediated learning of the participants within this study most often took the form of personal research, with the use of technology for example (i.e., research on the Internet). Several of them discussed that, at their level of coaching, this process was essential to stay current, relevant, and continue to improve. Their emphasis on up-to-date knowledge entails the need for renewal, and therefore supports theory in that the process of knowledge creation may be cyclical and continuous (Nonaka & Takeuchi, 1995; Werthner & Trudel, 2009). This process also included individuals, groups, and organizations, which demonstrates well the importance of technology within the field of KM.

The modern technological environment has been extremely influential in the development of the KM field (Jasimuddin, 2012; Nonaka et al., 2000; Nonaka & Takeuchi, 1995; Teece, 1998). Nash and Sproule (2009) suggested this environment would encourage

coaches to deliberately seek knowledge on their own time. Wilson et al. (2010) and Wright et al. (2007) also demonstrated minor hockey coaches use technology for ideas such as practice drills (i.e., professional knowledge). As mentioned above, the current study supports these findings. The coaches of this study typically used the Internet as part of their unmediated personal research. The participants also found it to be most effective in addressing their challenge with accessing expertise, in the form of professional knowledge or knowledgeable professionals. In accordance with existing research, this was helpful in managing their professional network (Occhino et al., 2013), but also their coaching program itself, as the flow of information to and from colleagues or sport organizations was facilitated.

Although the availability and quality of technology was a barrier for some of the participants, for those who did have access, the significance of the impact was amplified within their specific regions. Technology may therefore be a valid vehicle to address the common needs and wants of these coaches, such as formal development opportunities. Coach certification programs through e-learning, online webinars, or web based communities of practice are only a few examples that could be explored, considering the above. The physical transportation of the expert or of the coach, as was suggested by the participants, would not be necessary under such circumstances. Further consideration of this important tool in their development of professional coaching knowledge is therefore well warranted.

Internalization in coaching

Nonaka and Konno (1998) explained the internalization of explicit knowledge into tacit knowledge is achieved through learning by doing processes. Nash and Collins' (2006) conceptualization of this process for expert coaches was framed as the development of a coaching instinct. They explained the recognition and recollection of scenarios trigger actions for

which the coach has only an abstract awareness of their own reasoning (Nash & Collins, 2006). The coaches within this study suggested internalization took place through their athletic and coaching experience, but also through their social environment.

During the practical application of their coaching knowledge (i.e., coaching experience), the participants of this study developed tacit professional knowledge through trial and error. A key component of this knowledge was a depth of understanding for the context within which they operated. This finding was consistent with knowledge theory and the conceptualization of internalization (Nonaka & Konno, 1998), as the individual process of actualizing and embodying knowledge involves the selection of that which is applicable to a particular scenario, from within the group or organizational setting (Nonaka & Konno, 1998). The tacit knowledge created is therefore specific to the context and social setting within which the practical application took place (Andersson & Östman, 2015; Teece, 1998). Specifically, understanding what to do or what not to do with a type or demographic of athlete was discovered first hand through practical application by the participants. These findings also reinforce coaching theory, as the context specific nature of coach knowledge development is evident (Werthner & Trudel, 2009). In practice, this also suggests developing local expertise may be a better alternative to hiring outside the country, for the transfer of this tacit knowledge takes time and energy (Nonaka & Takeuchi, 1995).

The findings of the present study also suggest the process of internalization occurred through the athletic experience of the participants, and developed their professional knowledge. This reinforces the idea that: (a) a coaching career is a continuation of an athletic career (Dvorak et al., 2011); (b) this experience will contribute to a coach's technical knowledge (i.e., professional knowledge; Rynne & Mallett, 2012); and (c) both are important and can potentially

provide competitive advantage to coaches within their respective context (Nonaka & Takeuchi, 1995). The fact these coaches generally competed in the specific sport they were coaching only reaffirm the above and is consistent with other studies on Canadian, Singaporean, and Australian coaches (Côté & Gilbert, 2009; Gilbert et al., 2006; Koh et al., 2011; Mallett & Lynch, 2006). Contrary to existing studies, however, the athletic career of the participants did not contribute to their coaching network (Occhino et al., 2013), or to the development of their coaching style (Rynne & Mallett, 2012).

Through the explicit instructions or programs of their coaches, the participants of this study gained explicit professional knowledge on what to do. However, it is only through the practical application of these principles that they developed a tacit understanding of them (e.g., how the exercise feels), which had not been communicated explicitly. This concept of “feeling what training was like” (Werthner & Trudel, 2009, p. 443) has been considered previously within a Canadian context. The KM literature has also explored methods by which this process can be facilitated, which ironically includes physical activity in some instances (Anderson & Ostman, 2015; Nonaka & Konno, 1998). The participants of this study reported this made communication easier, as the tacit knowledge they shared with their athletes enabled them to interact with ease and empathy. This idea of knowing more than you can say (Polanyi, 1967) was truly reflected in the responses of the participants. According to these findings, the hiring practices of sport managers should continue to weight on former athletic experience, as the coach’s tacit professional knowledge of the sport would provide them with competitive advantage (Nonaka & Takeuchi, 1995). However, as per Côté and Gilbert’s (2009) concerns, the evaluation of a coach’s interpersonal and intrapersonal knowledge in addition to this is important for hiring practices to be effective.

The coaches within this study did not lack athletic experience, as this was considered a significant source of coaching knowledge for them. For some, it was considered the most important step in their development as a coach. For others, it was a step they have yet to graduate from as they were still actively competing at a high level. Nevertheless, the participants also identified limitations around access to athletic competition and resources, such as funding, transportation, or equipment. In some circumstances this resulted in the inability of athletes or coaches to attend major Games. One coach actually affirmed he was also competing in his event, with the team he was coaching. This example is a result of outstanding circumstances but the emergent theme remains; these coaches lack the level of access to competition that they feel would be reasonable in order to be competitive at this elite level. The potential impact competition can have on this aspect of their development therefore warrants the need to find ways of improving accessibility within the context under study. For the CGF, this may include adjusting their qualification process or reviewing the competitions at which athletes can qualify for the CWG.

Finally, the coaches in this study also internalized interpersonal knowledge through their social environment. Good interpersonal knowledge in the form of verbal and non-verbal communication skills has been identified within previous research as a characteristic of good coaching, at the higher and lower levels of sport (Becker, 2009; Smoll, Cumming, & Smith, 2011; Choi, Cho, & Kim, 2005; Bowes & Jones, 2006). Recommendations have also been put forth on how coaches can manage the interpersonal relationships within their practice; such as those they have with the parents of the athlete (Smoll et al., 2011). However, little attention has been brought to the way these coaches come to acquire interpersonal knowledge. This study therefore contributed to theory and practice as it was identified that interpersonal knowledge is

developed predominantly through practical application (i.e., internalization) and acquired in the tacit form. The opportunity for practical application occurred in the participants' social environment, typically with individuals who had an impact on their coaching (i.e., athletes, athlete's parents).

The tacit nature of this knowledge could be a result of the non-verbal, non-explicit components of interaction, including the social systems governing them (Côté & Gilbert, 2009). Considering the competitive advantage tacit knowledge would provide a coach in their practice (Nonaka & Takeuchi, 1995), this finding partially supports the idea that interpersonal knowledge helps to set the great apart from the good (Becker, 2009). It also supports the notion that developing interpersonal knowledge should be a part of a coach's training or professional development (Côté & Gilbert, 2009). On no occasion did any of the participants affirm they attended any formal training targeted at the development of their interpersonal knowledge. Networking and other opportunities were highlighted but the focus was on the development of professional knowledge. The need to consider the interpersonal aspect of the coach's knowledge development therefore remains, and warrants action by sport organizations in the form of programs or initiatives specifically targeted at this aspect of their coaching.

Study Limitations

The limitations of this study are both methodological and conceptual. The constructivist perspective being utilized required the interpretation of the data by the researcher and therefore provided room for bias. A deductive approach was utilized in order to collect the data on coach development, which may also have contributed to this bias, as the researcher lead the conversation based on existing research. Nonetheless, the process followed was based on peer-reviewed research and measures such as peer debriefing were utilized in order to address this.

The researcher also provided the participants the opportunity to expand on emerging themes and probed significantly in areas not found within the extant literature. Although the participants spoke either French or English, another limitation presented itself during the process of transcription, as their specific dialect or accent was often hard to understand. Also, the participants recruited for this study came from multiple different countries. Although several common contextual elements and challenges were identified, differences that were not considered within this study certainly exist. The low female and para-sport representation also limits the transferability of the findings, but the male able-bodied sport coaches were sufficient to achieve saturation of the segment. Finally, the researcher was only immersed within the context of competition, and not the context of the participant's sport system. Hence, the understanding of the context under study, and the concepts discussed by the participants, was limited to that which was explicitly shared. Being immersed within the context under study would have been advantageous to the ability of the researcher to provide a comprehensive definition of the participant's reality.

Although the conceptual framework of knowledge development has been considered with the KM literature, this is the first time it has been considered within the context of coach knowledge development. Although this was a creative way of considering the role of the CGF in the development of coaches, the applicability of the framework was not entirely supported by the results. This is not to say it is not applicable, but simply that some gaps in the data collection were identified, specifically in the researcher's ability to identify and probe around the process of externalization for example. Also, the coaches were not told the conceptualization of coaching knowledge would include professional, interpersonal, and intrapersonal knowledge. This may explain their focus on sport specific or professional coaching knowledge. Nonetheless, probing

did include the consideration of these in the research, but the results may have been improved had it been clarified initially.

Future Research

The extant research on coaching is significant (Rangeon et al., 2009) and appears relatively grounded in the idea that contextual differences will ultimately dictate the coach's choice or preference of development pathway (Werthner & Trudel, 2009). Nonetheless, the focus remains predominantly on the development of professional knowledge (Côté & Gilbert, 2009) and coaches from Western Europe, North America, and Australia (Werthner & Trudel, 2009). Furthermore, the coaching context is composed of organizations that will have a significant impact on the availability of development opportunities. Among them, organizations such as the CGF gather coaches from across the continents but are hardly considered as influential agents in the development of coaching knowledge within the literature. Arguably, this is a significant gap to be addressed, as these organizations have a vested interest in the development of coaches. For instance, the IOC pours copious amounts of funds into the Olympic Solidarity Program (IOC, 2012), which contributes to the development of coaches, but is hardly explored as such in academia. Understanding the impact of these programs, evaluating their effectiveness, but also their contextual appropriateness, will help to improve them and the sport systems within which they are implemented.

The present study contributed to the coaching literature by exploring opportunities available in addressing the needs and wants of a population of coaches that has hardly been considered in the literature. The findings show significant gaps in the current framework available to them, and also future research avenues that should be explored. Firstly, coaches from African and small island regions of the Commonwealth are in need of formalized and structured

programs for coach development. Generally, exploring formal methods of targeting interpersonal and intrapersonal coaching knowledge in research would be beneficial. This knowledge will often take the tacit form and will potentially be significant in improving coaching in the population under study. Further to this, empirically testing such programs will help to validate or reject the idea that this knowledge can in fact be developed formally, as the findings of this study did not identify this.

Furthermore, the KM literature typically studies the role of individuals who work directly for the organization. The unique nature of sport, however, calls on the agency of several stakeholders in order to address challenges around improving the core product: the competition. Hence, the knowledge of these stakeholders (e.g., coaches), who are not typically employed by the sport organization (e.g., CGF), has a direct impact on their ability to produce a quality product. Exploring organizations such as the CGF and understanding the relationships that exist within their stakeholder network regarding KM may be beneficial in laying the groundwork for a study on how these stakeholder groups can impact the quality of the actual competitive event. Exploring tactics for leveraging these relationships and the knowledge that could be shared in doing so would also be helpful to these organizations.

Chapter 7: Conclusion

The purpose of this study was to explore the needs and wants of elite coaches from the African and small island regions of the Commonwealth at a major sport event: the CWG in Glasgow, Scotland. More specifically, the development of their coaching knowledge and their respective sport context was analyzed in order to identify and understand these needs and wants. These implications were considered within the scope of coach knowledge management, and recommendations were put forth as to how this group's needs and wants can effectively be addressed to improve competition quality.

By focusing on the process by which the coaches' knowledge was developed, as per Andersson and Östman's (2015) recommendation, the research identified key areas of knowledge development for these coaches. The approach used was also instrumental in identifying the gaps within their development, and understanding their needs and wants. Hence, the findings of this study demonstrated coaches from these regions developed tacit knowledge through their social environment, mentorship, and their athletic and coaching careers. This took the form of interpersonal knowledge, intrapersonal knowledge, and professional knowledge, respectively, and upholds Côté and Gilbert's (2009) conceptualization of coaching knowledge, where each of these is important to consider in coach development. Explicit knowledge was exclusively reported as having been in the form of professional knowledge, which was developed through their social environment, the Internet, personal research, and all formal learning opportunities (e.g., workshops, certification, education), although some more than others. Finally, the participants of this study did not discount interpersonal and intrapersonal knowledge, but their main focus was on the development of professional knowledge. The need to clearly

define coaching knowledge and to explore the full spectrum of knowledge types therefore remains.

Interesting observations within this study include the consideration of certification programs as an important step in their transition from an athletic career to a coaching career. Encouraging athletes to take their first step into coaching by taking a course would be advantageous to the ability of the CGF to improve the sport systems within these regions. The importance the participants attribute to their athletic career and to technology was also noteworthy. These learning opportunities appeared to make up for the lack of local expertise. This, coupled with their need for formal learning, presents an opportunity to address several issues simultaneously (e.g., formal online education). Formalizing the process by which these coaches come to acquire the knowledge they need to achieve success and improve the competition at the CWG can take several forms, some of which have been outlined. Nonetheless, several opportunities remain to be considered.

The needs and wants of these coaches also included several aspects indirectly related to their ability to develop their coaching knowledge. Working and putting food on the table took priority over attending a training session as a volunteer, and having the basic equipment for their coaching took priority over professional development. The lack of funding also affected their access to certain competitions, such as the qualifiers of the CWG. Exploring the possibility of centralizing the qualification process would be beneficial to these coaches. They also identified the need for alternative fundraising strategies. Professional development in the field of sport management for these coaches could assist on this front. These examples would help reduce the challenges faced by coaches and provide them an opportunity to prioritize their professional development, and that of the athletes.

The CGF is therefore particularly poised for the development of such initiatives. It's mandate to strengthen the sport systems of the Commonwealth can be upheld either at their events, in an online environment, locally through their respective Commonwealth Games Associations, or through all of these vehicles. Ultimately, coach knowledge is an essential resource for the improvement of competition quality. The CGF and other similar organizations should consider a deliberative democratic approach to Games governance in an effort to effectively identify the needs and wants of this stakeholder first hand. The purpose of exploring the needs and wants of these coaches has therefore been achieved but further research is necessary, especially within the context under study.

References

- Alavi, M., & Leidner, D. E. (2001). Review: Knowledge management and knowledge management systems: conceptual foundations and research issues. *MIS Quarterly*, 25(1), 107–136.
- Allee, V. (2003). *The Future of Knowledge: Increasing Prosperity Through Value Networks*. MA: Butterworth-Heinemann.
- Andersson, J., & Östman, L. (2015). A Transactional way of analysing the learning of ‘tacit knowledge’. *Interchange*, 46(3), 271-287.
- Barnes, M., Newman, J., Knops, A., & Sullivan, H. (2003). Constituting ‘the public’ in public participation. *Public Administration*, 81(2), 379-399.
- Becker, A. J. (2009). It's not what they do, it's how they do it: Athlete experiences of great coaching. *International Journal of Sports Science & Coaching*, 4(1), 93-119.
- Bleed, R. A. (2001). Hybrid Campus for the New Millennium. *Educause Review*, 36(1), 16-24.
- Bloom, G.A. (2013). Mentoring for sport coaches. In P. Potrac, W. Gilbert, & J. Denison (Eds.), *Routledge Handbook of Sports Coaching*, (pp. 476-485). NY: Routledge.
- Bloom, G. A., Durand-Bush, N., Schinke, R. J., & Salmela, J. H. (1998). The importance of mentoring in the development of coaches and athletes. *International Journal of Sport Psychology*, 29, 267-281.
- Bowes, I., & Jones, R. L. (2006). Working at the edge of chaos: Understanding coaching as a complex, interpersonal system. *Sport Psychologist*, 20(2), 235-245.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101.
- British Broadcasting Corporation (2014, 6 November). Glasgow 2014: Commonwealth Games

- 'was £25m under budget'. Retrieved February 22nd, 2016 from: <http://www.bbc.com/news/uk-scotland-glasgow-west-29935465>.
- Callary, B., Werthner, P., & Trudel, P. (2012). How meaningful episodic experiences influence the process of becoming an experienced coach. *Qualitative Research in Sport, Exercise and Health*, 4(3), 420-438.
- Canadian Sport Policy (2012). Retrieved February 22nd, 2016 from: http://sirc.ca/CSPRenewal/documents/CSP2012_EN.pdf.
- Choi, D. W., Cho, M. H., & Kim, Y. K. (2005). Youth sport coaches' qualities for successful coaching. *World Leisure Journal*, 47(2), 14-22.
- Christensen, M. K. (2014). Exploring biographical learning in elite soccer coaching. *Sport, Education and Society*, 19(2), 204-222.
- Commonwealth Games Federation (2008). *Brand standards manuel 2008: Uniting the Commonwealth through sport*. Retrieved February 22nd, 2016 from http://www.thecgf.com/about/CGF_Brand_Standards_Manual_2008.pdf.
- Commonwealth Games Federation (2013). *Constitution, regulations, and code of conduct*. Retrieved February 22nd, 2016 from <http://www.thecgf.com/about/constitution.pdf>.
- Commonwealth Games Federation (2014). *Commonwealth Countries*. Retrieved February 22nd, 2016 from: http://www.thecgf.com/countries/country_index.asp
- Commonwealth Games Federation (2014). *Growth of the Commonwealth Games*. Retrieved February 22nd, 2016 from: <http://www.thecgf.com/games/growth.asp>.
- Côté, J., & Gilbert, W. (2009). An integrative definition of coaching effectiveness and expertise. *International Journal of Sports Science & Coaching*, 4(3), 307-323.
- Creswell, J. W., & Clark, V. L. P. (2007). *Designing and conducting mixed methods research*.

CA: Sage Publications.

Crotty, M. (1998). *The foundations of social research*. UK: Sage Publications.

Davenport, T. H., & Prusak, L. (1998). *Working knowledge*. MA: Harvard Business School Press.

Dawson, A., & Phillips, P. (2013). Coach career development: Who is responsible?. *Sport Management Review*, 16(4), 477-487.

De Bosscher, V., De Knop, P., Van Bottenburg, M., Shibli, S., & Bingham, J. (2009). Explaining international sporting success: An international comparison of elite sport systems and policies in six countries. *Sport Management Review*, 12(3), 113-136.

Duffy, P., North, J., & Muir, B. (2012). Understanding the impact of sport coaching on legacy. *International Journal of Sport Policy and Politics*, 5(2), 165-182.

Dvorak, M., Valkova, H., & Belka, J. (2011). Player careers of football coaches. *Studies in Physical Culture and Tourism*, 18(3), 243-251.

Erickson, K., Bruner, M. W., MacDonald, D. J., & Côté, J. (2008). Gaining insight into actual and preferred sources of coaching knowledge. *International Journal Of Sports Science & Coaching*, 3(4), 527-538.

Erickson, K., Côté, J., & Fraser-Thomas, J. (2007). Sport experiences, milestones, and educational activities associated with high-performance coaches' development. *Sport Psychologist*, 21(3), 302-316.

Fortin, M.F. (2010). *Fondements et étapes du processus de recherche* (2nd ed.). Canada: Chenelière Éducation.

Gilbert, W. D., Côté, J., & Mallett, C. (2006). Developmental paths and activities of successful sport coaches. *International Journal of Sports Science and Coaching*, 1(1), 69-76.

- Gilbert, W. D., Gallimore, R., & Trudel, P. (2009). A learning community approach to coach development in youth sport. *Journal of coaching education*, 2(2), 1-21.
- Gilbert, W. D., & Trudel, P. (2004). Analysis of coaching science research published from 1970–2001. *Research quarterly for exercise and sport*, 75(4), 388-399.
- Goodman, J. (2007). *Developing a KM culture*. UK: Ark Group.
- Gourlay, S. (2006). Towards conceptual clarity for ‘tacit knowledge’: A review of empirical studies. *Knowledge Management Research & Practice*, 4(1), 60-69.
- Grant, R. M. (1996). Toward a knowledge-based theory of the firm. *Strategic Management Journal*, 17, 109-122.
- Gray, D. E. (2011). Journeys towards the professionalisation of coaching: Dilemmas, dialogues and decisions along the global pathway. *Coaching: An International Journal of Theory, Research and Practice*, 4(1), 4-19.
- Grbich, C. (2013). *Qualitative data analysis: An introduction*. CA: Sage Publications.
- Gutmann, A., & Thompson, D. (2004). *Why deliberative democracy?*. NJ: Princeton University Press.
- Halbwirth, S., & Toohey, K. (2001). The Olympic Games and knowledge management: A case study of the Sydney organising committee of the Olympic Games. *European Sport Management Quarterly*, 1(2), 91-111.
- Heisig, P. (2009). Harmonisation of knowledge management: Comparing 160 KM frameworks around the globe. *Journal of Knowledge Management*, 13(4), 4-31.
- Horn, T. S. (2008). Coaching Effectiveness in the Sport Domain. In Horn, T.S., (Ed.), *Advances in Sport Psychology* (3rd ed., pp. 239-267). IL: Human Kinetics.
- Houghton, C., Casey, D., Shaw, D., & Murphy, K. (2013). Rigour in qualitative case-study

- research. *Nurse Researcher*, 20(4), 12-17.
- Huber, G. P. (1991). Organizational learning: The contributing processes and the literatures. *Organization Science*, 2(1), 88-115.
- International Council for Coaching Excellence & Association of Summer Olympic International Federations (2012). *International sport coaching framework: Version 1.1*. Retrieved February 22nd, 2016 from http://www.icce.ws/documents/2012/ISCF_1_aug_2012.pdf
- International Olympic Committee (2012). A Direct Line! 2013-2016 Quadrennial Plan. Retrieved February 22nd, 2016 from: http://www.olympic.org/Documents/Commissions_PDFfiles/Olympic_Solidarity/2013-2016_Quadrennial_Brochure-A_Direct_Line.pdf.
- Irwin, G., Hanton, S., & Kerwin, D. (2004). Reflective practice and the origins of elite coaching knowledge. *Reflective Practice*, 5(3), 425-442.
- Jasimuddin, S. M. (2006). Disciplinary roots of knowledge management: A theoretical review. *International Journal of Organizational Analysis*, 14(2), 171-180.
- Jasimuddin, S. M. (2012). *Knowledge management: An interdisciplinary perspective*. NY: World Scientific Publishing Co Pte Ltd.
- Jones, T.M., & Wicks, A.C. (1999). Convergent stakeholder theory. *Academy of Management Review*, 24(2), 206-221.
- Kakabadse, N. K., Kakabadse, A., & Kouzmin, A. (2003). Reviewing the knowledge management literature: Towards a taxonomy. *Journal of Knowledge Management*, 7(4), 75-91.
- Knafo, A. (2003). Contexts, relationship quality, and family value socialization: The case of parent-school ideological fit in Israel. *Personal Relationships*, 10(3), 371-388.
- Koh, K. T., Mallett, C. J., & Wang, C. K. J. (2011). Developmental pathways of Singapore's

- high-performance basketball coaches. *International Journal of Sport and Exercise Psychology*, 9(4), 338-353.
- Leopkey, B., & Parent, M. M. (2011). Olympic Games legacy: From general benefits to sustainable long-term legacy. *The International Journal of the History of Sport*, 29(6), 924-943.
- Lubit, R. (2001). Tacit knowledge and knowledge management: The keys to sustainable competitive advantage. *Organizational Dynamics*, 29(3), 164-178.
- MacIntosh, E. W. (2015). Young athlete major event experiences: Brand co-creators and ambassadors. *Sport in Society*, 1-16.
- MacIntosh, E. W., & Nicol, L. (2012). Athletes' event experiences of the XIX Commonwealth Games in Delhi, India. *International Journal of Event and Festival Management*, 3(1), 12-29.
- Malete, L., & Sullivan, P. (2009). Sources of coaching efficacy in coaches in Botswana. *International Journal of Coaching Science*, 3(1), 17-27.
- Mallett, C., & Lynch, M. (2006). Becoming a successful high performance track and field coach. *Modern Athlete and Coach*, 44(2), 15-20.
- Merriam, S. B. (2009). *Qualitative research a guide to design and implementation*. CA: Jossey-Bass.
- McAdam, R., Mason, B., & McCrory, J. (2007). Exploring the dichotomies within the tacit knowledge literature: Towards a process of tacit knowing in organizations. *Journal of Knowledge Management*, 11(2), 43-59.
- Miles, M.B., & Huberman, A.M. (1994). *An expanded resource: Qualitative data analysis* (2nd ed.). CA: Sage Publications.

- Mitchell, R. K., Agle, B. R., & Wood, D. J. (1997). Toward a theory of stakeholder identification and salience: Defining the principle of who and what really counts. *Academy of management review*, 22(4), 853-886.
- Moon, J. A. (2004). A handbook of reflective and experiential learning: Theory and practice. UK: Routledge-Falmer.
- Nash, C., & Collins, D. (2006). Tacit knowledge in expert coaching: Science or art?. *Quest* 58(4), 465-477.
- Nash, C. S., & Sproule, J. (2009). Career development of expert coaches. *International Journal of Sports Science and Coaching*, 4(1), 121-138.
- Newman, B. D., & Conrad, K. W. (2000, October 30-31). *A framework for characterizing knowledge management methods, practices, and technologies*. Paper presented at the Practical Aspects of Knowledge Management (PAKM) Conference, Basel, Switzerland. CEUR-WS.org.
- Nonaka, I. (1994). A dynamic theory of organizational knowledge creation. *Organization science*, 5(1), 14-37.
- Nonaka, I., & Konno, N. (1998). The concept of "ba": Building a foundation for knowledge creation. *California management review*, 40(3), 40-54.
- Nonaka, I., & Takeuchi, H. (1995). *The knowledge-creating company*. NY: Oxford University Press.
- Nonaka, I., & Toyama, R. (2003). The knowledge-creating theory revisited: knowledge creation as a synthesizing process. *Knowledge management research & practice*, 1(1), 2-10.
- Nonaka, I., Toyama, R., & Nagata, A. (2000). A firm as a knowledge-creating entity: A new perspective on the theory of the firm. *Industrial and Corporate Change*, 9(1), 1-20.

- Occhino, J., Mallett, C., & Rynne, S. (2013). Dynamic social networks in high performance football coaching. *Physical Education and Sport Pedagogy*, 18(1), 90-102.
- O'Reilly, N., & Knight, P. (2007). Knowledge management best practices in national sport organizations. *International Journal of sport management and marketing*, 2(3), 264-280.
- O'Reilly, N., Nadeau, J., & Kaplan, A. (2011). Do fans want their team to be competitive in the short-term (the next game) or the long-term (the full season), and does the answer affect management decisions?. *European Sport Management Quarterly*, 11(1), 73-86.
- Parent, M. M. (2008). Evolution and issue patterns for major-sport-event organizing committees and their stakeholders. *Journal of Sport Management*, 22(2), 135-164.
- Parent, M. M., Kristiansen, E., & MacIntosh, E. W. (2014). Athletes' experiences at the Youth Olympic Games: Perceptions, stressors, and discourse paradox. *Event Management*, 18(3), 303-324.
- Parent, M. M., MacDonald, D., & Goulet, G. (2013). The theory and practice of knowledge management and transfer: The case of the Olympic Games. *Sport Management Review*. Retrieved from <http://dx.doi.org/10.1016/j.smr.2013.06.002>.
- Polanyi, M. (1967). *The tacit dimension*. UK: Routledge.
- Pope, J. P., Stewart, N. W., Law, B., Hall, C. R., Gregg, M. J., Robertson, R., & Rynne, S. (2015). Knowledge Translation of Sport Psychology to Coaches: Coaches' Use of Online Resources. *International Journal of Sports Science and Coaching*, 10(6), 1055-1070.
- Pun, K. F., & Nathai-Balkissoon, M. (2011). Integrating knowledge management into organizational learning: A review of concepts and models. *The Learning Organization*, 18(3), 203-223.

- Ramchandani, G., & Wilson, D. (2014). Historical and contemporary trends in competitive balance in the Commonwealth Games. *Revista Internacional de Ciencias del Deporte*, 10(35), 75-88.
- Rangeon, S., Gilbert, W., Trudel, P. and Côté, J. (2009, June 17-21). *Coaching Science in North America*, Paper Presented at the 12th ISSP World Congress of Sport Psychology, Marrakesh, Morocco.
- Rowley, J. (2007). The wisdom hierarchy: Representations of the DIKW hierarchy. *Journal of Information Science*, 33(2), 163-180.
- Rubin, I.J., & Rubin, I.S. (2005). *Qualitative interviewing: The art of hearing data* (2nd ed.). CA: Sage Publications.
- Rynne, S. B., & Mallett, C. J. (2012). Understanding the work and learning of high performance coaches. *Physical Education and Sport Pedagogy*, 17(5), 507-523.
- Salmela, J. H., & Moraes, L. C. (2003). Development of expertise: The role of coaching, families, and cultural contexts. In J.L. Starkes and K.A. Ericsson (Eds.), *Expert Performance in Sports: Advances in research on sport expertise*, (pp. 275-293). IL: Human Kinetics.
- Schenk, J., Parent, M. M., MacDonald, D., & Proulx Therrien, L. (2015). The evolution of knowledge management and transfer processes from domestic to international multi-sport events. *European Sport Management Quarterly*, 15(5), 535-554.
- Smoll, F., Cumming, S., & Smith, R. (2011). Enhancing coach-parent relationships in youth sports: Increasing harmony and minimizing hassle. *International Journal of Sports Science and Coaching*, 6(1), 13-26.
- Spender, J. C. (1996a). Making knowledge the basis of a dynamic theory of the firm. *Strategic*

- Management Journal*, 17, 45-62.
- Spender, J. C. (1996b). Organizational knowledge, learning and memory: Three concepts in search of a theory. *Journal of Organizational Change Management*, 9(1), 63-78.
- Sveiby, K. E. (2001). A knowledge-based theory of the firm to guide in strategy formulation. *Journal of Intellectual Capital*, 2(4), 344-358.
- Teece D. J. (1998). Capturing value from knowledge assets: The new economy, markets for know-how, and intangible assets. *California Management Review*, 40(3), 55-79.
- The Scottish Government (2015). An evaluation of legacy from the Glasgow 2014 Commonwealth Games: Post games report. Retrieved February 22nd, 2016 from: <http://www.gov.scot/Resource/0048/00482151.pdf>.
- Thibault, L., Kihl, L., & Babiak, K. (2010). Democratization and governance in international sport: Addressing issues with athlete involvement in organizational policy. *International Journal of Sport Policy*, 2(3), 275-302.
- Thompson, A., Bezodis, I. N., & Jones, R. L. (2009). An in-depth assessment of expert sprint coaches' technical knowledge. *Journal of Sports Sciences*, 27(8), 855-861.
- Trudel, P. and Gilbert, W. D. (2006). Coaching and coach education. In Kirk, D., O'Sullivan, M., & McDonald, D. (Eds.), *Handbook of physical education*, (pp. 516-539). UK: Sage Publications.
- Turner, D., Nelson, L., & Potrac, P. (2012). The journey is the destination: Reconsidering the expert sports coach. *Quest*, 64(4), 313-325.
- Walsh, J. P., & Ungson, G. R. (1991). Organizational memory. *Academy of Management Review*, 16(1), 57-91.
- Werthner, P., & Trudel, P. (2009). Investigating the idiosyncratic learning paths of elite

- Canadian coaches. *International Journal of Sports Science and Coaching*, 4(3), 433-449.
- Wilson, L. M., Bloom, G. A., & Harvey, W. J. (2010). Sources of knowledge acquisition: Perspectives of the high school teacher/coach. *Physical Education and Sport Pedagogy*, 15(4), 383-399.
- Wiman, M., Salmoni, A. W., & Hall, C. R. (2010). An examination of the definition and development of expert coaching. *International Journal of Coaching Science*, 4(2), 37-60.
- Wright, T., Trudel, P., & Culver, D. (2007). Learning how to coach: The different learning situations reported by youth ice hockey coaches. *Physical Education and Sport Pedagogy*, 12(2), 127-144.
- Yin, R. K. (2009). *Case study research: Design and methods* (4th ed.). CA: Sage Publications.

Appendix A: University of Ottawa Ethics Approval Notice

File Number: H05-14-07

Date (mm/dd/yyyy): 06/09/2014



Université d'Ottawa **University of Ottawa**
 Bureau d'éthique et d'intégrité de la recherche 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>
Eric	MacIntosh	Health Sciences / Human Kinetics	Principal Investigator
Philippe	Patry	Health Sciences / Human Kinetics	Co-investigator

File Number: H05-14-07**Type of Project:** Professor**Title:** Improving the Primary Stakeholder Experience of Major Multi-Sport Events

Approval Date (mm/dd/yyyy)	Expiry Date (mm/dd/yyyy)	Approval Type
06/09/2014	06/08/2015	Ia

(Ia: Approval, Ib: Approval for initial stage only)**Special Conditions / Comments:**
N/A

File Number: H05-14-07

Date (mm/dd/yyyy): 06/09/2014



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

University of Ottawa
Office of Research Ethics and Integrity

This is to confirm that the University of Ottawa Research Ethics Board identified above, which operates in accordance with the Tri-Council Policy Statement (2010) and other applicable laws and regulations in Ontario, has examined and approved the ethics application for the above named research project. Ethics approval is valid for the period indicated above and subject to the conditions listed in the section entitled "Special Conditions / Comments".

During the course of the project, the protocol may not be modified without prior written approval from the REB except when necessary to remove participants from immediate endangerment or when the modification(s) pertain to only administrative or logistical components of the project (e.g., change of telephone number). Investigators must also promptly alert the REB of any changes which increase the risk to participant(s), any changes which considerably affect the conduct of the project, all unanticipated and harmful events that occur, and new information that may negatively affect the conduct of the project and safety of the participant(s). Modifications to the project, including consent and recruitment documentation, should be submitted to the Ethics Office for approval using the "Modification to research project" form available at: <http://www.research.uottawa.ca/ethics/forms.html>.

Please submit an annual report to the Ethics Office four weeks before the above-referenced expiry date to request a renewal of this ethics approval. To close the file, a final report must be submitted. These documents can be found at: <http://www.research.uottawa.ca/ethics/forms.html>.

If you have any questions, please do not hesitate to contact the Ethics Office at extension 5387 or by e-mail at: ethics@uOttawa.ca.

Riana Marcotte
Protocol Officer for Ethics in Research
For Daniel Lagarec, Chair of the Health Sciences and Sciences REB

2

550, rue Cumberland, pièce 154 550 Cumberland Street, room 154
Ottawa (Ontario) K1N 6N5 Canada Ottawa, Ontario K1N 6N5 Canada
(613) 562-5387 • Téléc./Fax (613) 562-5338
www.recherche.uottawa.ca/deontologie/ www.research.uottawa.ca/ethics/

Appendix B: Letter of Information (EN)



uOttawa

Université d'Ottawa
Faculté des sciences
de la santé

École des sciences de
l'activité physique

University of Ottawa
Faculty of Health
Sciences

School of Human
Kinetics

Improving the Primary Stakeholder Experience of Major Multi-Sport Events

Dear [Athlete/Coach Participant] of the 2014 Commonwealth Games,

You are invited to participate in a research study which will examine your experience, perceptions and needs as a key stakeholder of the Commonwealth Games. To date, little empirical work exists regarding how your experiences as a key stakeholder are influenced by the planned environment surrounding the Games and your needs to ensure you have a positive experience. As a key stakeholder, it is important to understand what elements can be improved upon for future events and strategic planning for the property rights holder (Commonwealth Games Federation).

Hence, you are invited to participate in this research study that consists of 10 minute survey for athletes and coaches. Furthermore, the coaches can partake in a semi-structured interview which lasts approximately 30 minutes. In order to participate, you must be 18 years of age and older. Your participation is strictly voluntary. You may refuse to participate, refuse to answer any question, or withdraw from the study at any time without any negative consequence. Your responses will remain strictly confidential and be kept in the locked office of the principal investigator. Neither you nor the Commonwealth Games Association in which you are a part of will be identified by name.

Findings will be used to help describe components important to helping increase future Games experiences for athletes and coaches. The study is supported by the Commonwealth Games Federation and is being conducted through The University of Ottawa. The findings will be available to you once the study has been completed through the Commonwealth Games Federation (e.g., during the Annual General Assembly).

If you have any questions regarding the ethical conduct of this study, you may contact the University of Ottawa's Protocol Officer for Ethics in Research at 613.562.5387.

Sincerely,

Eric MacIntosh, Ph.D.
Associate Professor
eric.macintosh@uottawa.ca
613.562.5800 ext. 4242
125 University Private (373 Montpetit)
Ottawa, Ontario, Canada, K1N 6N5

☎ 613 562-5852

☎ 613 562-5149

125 Université / University
Ottawa ON K1N 6N5 Canada

www.uOttawa.ca

Letter of Information (FR)



uOttawa

Université d'Ottawa
Faculté des sciences
de la santé

École des sciences de
l'activité physique

University of Ottawa
Faculty of Health
Sciences

School of Human
Kinetics

Improving the Primary Stakeholder Experience of Major Multi-Sport Events

Cher [Athlète/Entraîneur Participant] des Jeux du Commonwealth 2014,

Vous êtes invité à participer dans une étude qui examinera vos expériences, perceptions et besoins en tant que partie prenantes importante dans le Jeux du Commonwealth. À date, très peu de recherche existe sur comment vos expériences en tant que partie prenantes importante sont influencé par l'environnement planifié autour des Jeux, et vos besoins pour assurer que votre expérience soit positive. Il est donc important de comprendre quels éléments peuvent être amélioré pour les futurs jeux et la planification stratégique des propriétaires (Commonwealth Games Federation).

Donc, vous êtes invité à participer dans cette étude qui consiste de remplir un questionnaire de 10 minutes pour les athlètes et les entraîneurs. De plus, les entraîneurs peuvent participer dans un entrevue semi-structurer qui durent approximativement 30 minutes. Pour participer, vous devez avoir plus de 18ans. Votre participation est strictement volontaire. Vous pouvez refuser de participer, refuser de répondre à une ou plusieurs questions, ou choisir de vous retirer de l'étude à tout temps sans conséquences négatives. Vos réponses seront complètement confidentielles, et seront gardé embarré dans le bureau de l'investigateur principal. Ni vous ni votre association des Jeux du Commonwealth ne sera identifié par leurs noms.

Les résultats seront utilisés pour décrire les composantes importantes qui aideront à améliorer l'expérience des athlètes et des entraîneurs dans les jeux futurs. Cette étude est supportée par la Commonwealth Games Federation et est exécuté à travers l'Université d'Ottawa. Les résultats seront disponibles à travers la Commonwealth Games Federation (e.g., durant l'assemblée général annuel) une fois l'étude complété.

Si vous avez des questions en ce qui concerne la conduite éthique de cette recherche, vous pouvez contacter l'agent de protocole de l'Université d'Ottawa pour l'éthique dans la recherche au 613.562.5387.

Sincèrement,

Eric MacIntosh, Ph.D.
Professeur agrégé
eric.macintosh@uottawa.ca
613.562.5800 ext. 4242
125 University Private (373 Montpetit)
Ottawa, Ontario, Canada, K1N 6N5

☎ 613 562-5852
☎ 613 562-5149

125 Université / University
Ottawa ON K1N 6N5 Canada

www.uOttawa.ca

Appendix C: Participant Consent Form (EN)

Improving the Primary Stakeholder Experience of Major Multi-Sport**Research Study Consent Form**

uOttawa

Principal investigator: Eric MacIntosh, University of Ottawa (School of Human Kinetics, Faculty of Health Sciences), 125 University St., Montpetit #373, Ottawa, ON, K1N 6N5, Tel: 613.562.5800 x 4242, Fax: 613.562.5497, Email: eric.macintosh@uottawa.ca

Co-investigator: Phillipe Patry (Masters thesis student).

Invitation to Participate: I am invited to participate in the above mentioned research study conducted by Eric MacIntosh and Phillipe Patry.

Purpose of the Study: The purpose of the study is to examine the primary stakeholders (i.e., athletes, coaches) of major multi-sport events and their experiences and perceptions of the sport event they are participating. A further purpose is to understand the stakeholders' opinions regarding the development experiences desired and needed to help strengthen the sport systems of their respective sport event (for example, coaching development). The data of this study will also be used as a part of Philippe Patry's Master's thesis.

Participation: My participation will consist of taking part in an interview concerning my role in the Games, which will take approximately 30 minutes. I will be asked questions on my learning experiences, and my perceptions about the sport event I am participating. As a voluntary participant, I have the option to refuse to answer any questions.

I accept audio-recording

I refuse audio-recording

Risks: My participation in this study will not entail any foreseeable risks. My choice to participate (or not) will have no effect on my relationship with the Commonwealth Games Federation.

Benefits: My participation in this study will provide me the opportunity to reflect on my experiences and further, to help my sport event property understand how to improve experiences for future participants.

Confidentiality and anonymity: I have received assurance from the researchers that all information will remain anonymous and in the locked office of the principal researcher for five years post publication. I understand that the findings will be used only for academic purposes (publication, presentation, technical

Université d'Ottawa
Faculté des sciences
de la santé

École des sciences de
l'activité physique

University of Ottawa
Faculty of Health
Sciences

School of Human
Kinetics

☎ 613 562-5852
☎ 613 562-5149

125 Université / University
Ottawa ON K1N 6N5 Canada

www.uOttawa.ca

report), will be pooled and will also be made available upon the study completion. Further, only the researchers will have access to the information and not the sport event property rights holder. Prior to the interview, I will be asked for my permission to be audio-record.

Voluntary Participation: I am under no obligation to participate, and there will be no negative consequences of my choosing to not participate in the study. If I choose to participate, I can withdraw from the study at any time and/or refuse to answer any questions, without suffering any negative consequences. If I withdraw from the study, I will decide at that point if I want the researchers to use my data or if I want them to destroy it and not use it.

Acceptance:

I, _____, agree to participate in the above research study conducted by Dr. Eric MacIntosh (School of Human Kinetics, Faculty of Health Sciences, University of Ottawa), and Phillipe Patry (School of Human Kinetics, Faculty of Health Sciences, University of Ottawa). I understand that by accepting to participate I am in no way waiving my right to withdraw from the study.

If I have any questions about the study, I may contact the researchers. If I have any ethical concerns regarding my participation in this study, I may contact the University of Ottawa's Protocol Officer for Ethics in Research, Tabaret Hall, 550 Cumberland Street, Room 154, Ottawa, ON, K1N 6N5, tel.: 613.562.5387, email: ethics@uottawa.ca.

I have been instructed to keep a second copy of this consent form for my records.

Participant's signature:

Date:

Researcher's signature:

Date:



uOttawa

Université d'Ottawa
Faculté des sciences
de la santé

École des sciences de
l'activité physique

University of Ottawa
Faculty of Health
Sciences

School of Human
Kinetics

Participant Consent Form (FR)

Improving the Primary Stakeholder Experience of Major Multi-Sport Events:

Formulaire de consentement

Investigateur Principal : Eric MacIntosh, Université d'Ottawa (École des Sciences de l'Activité Physique, Faculté des Sciences de la Santé), 125 University St., Montpetit #373, Ottawa, ON, K1N 6N5, Tel: 613.562.5800 x 4242, Fax: 613.562.5497, Email: eric.macintosh@uottawa.ca

Co-investigateur: Philippe Patry (étudiant à la Maitrise)

Invitation à Participer: Je suis invité à participer à l'étude mentionnée ci-dessus menée par Eric MacIntosh et Philippe Patry.

But de l'étude: Le but de l'étude est d'examiner les parties prenantes primaires (i.e., athlètes, entraîneurs) d'événements majeurs multisports et leurs expériences et perceptions de l'évènement sportif dans lequel ils participent. Un autre but de l'étude est de comprendre l'opinion de ces parties prenantes en ce qui concerne les expériences développementales nécessaires pour renforcer le système sportif de l'évènement sportif en question (par exemple, le développement des entraîneurs). Les données de cette étude seront aussi utilisées pour la thèse de Maitrise de Philippe Patry.

Participation : Ma participation consiste d'une entrevue spécifique à mon rôle dans l'évènement, qui prendra approximativement 30 minutes. Je serai questionné sur mes expériences et mes perceptions de l'évènement sportif dans lequel je participe. En tant que participant volontaire, j'ai l'option de refuser de répondre aux questions.

J'accepte de me faire audio enregistrer

Je refuse de me faire audio enregistrer

Risque : Ma participation dans cette étude ne comprend aucun risque prévisible. Mon choix de participer (ou non) n'aura aucun effet sur ma relation avec la Fédération des Jeux du Commonwealth.

Bénéfices : Ma participation dans cette étude me donnera l'opportunité de réfléchir au sujet de mes expériences et aidera aux propriétaires de l'évènement sportif à mieux comprendre comment améliorer les expériences des athlètes et entraîneurs future.

Confidentialité et anonymat : J'ai reçu l'assurance des chercheurs que tout information sera anonyme et placé en sécurité dans le bureau barré de

613 562-5852

613 562-5149

125 Université / University
Ottawa ON K1N 6N5 Canada

www.uOttawa.ca

l'investigateur principal pour 5ans après publication. Je comprends que les résultats de cette recherche seront seulement utilisés pour des fins académiques (publication, présentation, rapport technique), seront regroupé et seront aussi disponible une fois l'étude complété. De plus, seulement les chercheurs vont avoir accès à l'information (pas les propriétaires de l'évènement sportif). Avant les entrevues, je serai demandé pour ma permission d'être audio enregistré.

Participation Volontaire : Je ne suis sous aucune obligation de participer. Ainsi, il n'y aura aucune conséquence négative si je décide de ne pas participer. Si je décide de participer, je peux me retirer de l'étude ou refuser de répondre à une question à tout temps, sans souffrir d'une conséquence négative. Si je me retire de l'étude, je déciderai si je veux que les chercheurs utilisent l'information que j'ai partagée ou si je veux qu'ils la détruisent.

Consentement :

Je, _____, accepte de participer à l'étude de recherche ci-dessus, menée par Dr. Eric MacIntosh (École des Sciences de l'Activité Physique, Université d'Ottawa) et Philippe Patry (École des Sciences de l'Activité Physique, Université d'Ottawa). Je comprends que, en acceptant de participer, je ne renonce pas à mon droit de me retirer de l'étude.

Si j'ai des questions à propos de l'étude, je peux communiquer avec les chercheurs. Si j'ai des préoccupations éthique au sujet de ma participation à cette étude, je peux communiquer avec l'agent de protocole de l'Université d'Ottawa pour l'éthique dans la recherche, pavillon Tabaret, 550, rue Cumberland, Pièce 154, Ottawa, ON, K1N

On m'a recommandé de garder une deuxième copie de ce formulaire de consentement pour mes records.

Signature du Participant:

Date:

Signature du chercheur:

Date:

Appendix D: Semi-Structure Coach Interview Guide

Demographics:

- | | |
|------------|---|
| 1. Name: | 2. Country of origin: |
| 3. Gender: | 4. Sport: |
| 5. Age: | 6. Years experience (national and total): |

Section 1General Topics:

Sport background

Learning situations

Coach development situation:

1. Athlete experience
2. Coaching experience
3. Education
4. Coach certification
5. Workshop/Clinic/Seminar
6. Personal research
7. Technology
8. Social environment
9. Mentorship
10. Others

General Probes:

- How has this helped you develop?
- How would you describe the process?
- What kind knowledge did you develop?
- Who offers this opportunity?
- Is this mandatory or on your own time?
- Who was involved in this development?
- Who had more of an impact on you?
- How would you define this?
- Was this formal or informal?
- How often did this take place?
- Where and when did this take place?

Section 2Role of sport organizations:

1. How is your sport system organized in your country? How would you describe it?
2. Does your sport organization assist in your development as a coach (how)?
 - a. What more do you think they can do to help you develop as a coach?
3. What do you think the role of the CGF is in coach development?
 - a. What do you think they can do to assist in your development as a coach?

Summary Questions:

4. Are there other situations that you believe have helped you develop as a coach (how)?
5. Do you have anything else to add? Do you have questions or comments?

Appendix E: Interview Cards

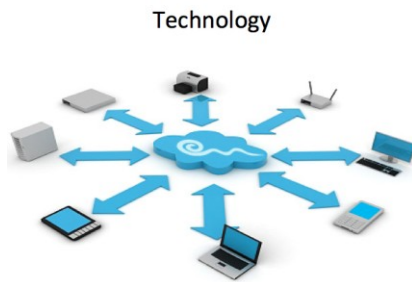


Mentoring

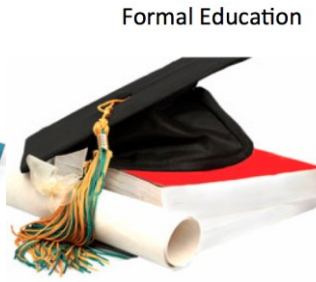


Coaching Experience

Athletic Experience



Technology



Formal Education

Coach Certification Programme



Coaching Workshop, Clinic, or Seminar



Social Environment



Personal Research

