

Examining Coach Pathways and Learning Situations:
High-Performance Head Hockey Coaches who Played Goal

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Table 1

List of Acronyms

Acronym	Meaning
AHL	American Hockey League
Asst	Assistant Coach
CCAA	Canadian College Athletic Association
CHL	Central Hockey League
CIAU	Canadian Interuniversity Athletic Union
CIS	Canadian Interuniversity Sport
CJAHL	Canadian Junior A Hockey League
DVD	Digital Versatile Disc
ECHL	East Coach Hockey League
Head	Head Coach
HockeyDB	Internet Hockey Database
HP	High-Performance
NCAA	National Collegiate Athletic Association
	Division I Men's
NCAA II	National Collegiate Athletic Association
	Division II Men's
NCAA III	National Collegiate Athletic Association
	Division III Men's
NCAA W	National Collegiate Athletic Association
	Division I Women's
NCAA III W	National Collegiate Athletic Association
	Division III Women's
NHL	National Hockey League
NLA	National League A Switzerland
OG	Olympic Games
OHL	Ontario Hockey League
QMJHL	Quebec Major Junior Hockey League
USCHO	United States College Hockey Online
USHS	United States High School
WC	World Championship
WHL	Western Hockey League
Yrs	Years

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Abstract

Using archival analysis and interviews this study examined the career pathways, learning experiences, and athletic experiences of 11 high-performance head hockey coaches who played goal in ice hockey. Guided by the learning situations discussed in Wright, Trudel, and Culver (2007) the interviews revealed four important learning experiences common to all the coaches: coach interactions, books and videotapes, coach clinics and academic education, and experiences related to playing and coaching. Like Werthner and Trudel (2009) the results indicated that certain similarities aside, each coach's career pathway is idiosyncratic with elite athletic experience being an important, but not imperative, aspect of high-performance coaches' career development. The findings provide insight into how these individuals acquired their coaching knowledge and provide a more complete picture of the developmental pathways associated with becoming a high-performance head hockey coach.

Chapter One: Introduction

Within any profession, leadership is an essential determinant in the practicality of the field. Sport coaches play an important role in helping athletes develop and succeed in the sporting world (McNabb, 1990). The highly dynamic and complex sport environment contributes to the wide range of role responsibilities involved in a coach's tasks (Cushion, Armour, & Jones, 2003). When searching for a head coach many important attributes must be taken into account by team administrators. These might include, but are not limited to, coach education, playing experience, coaching experience, and past coaching success. Among these, previous athletic experience seems to be a critical factor when seeking a head coach (Carter & Bloom, 2009). Having reviewed the work of Erickson, Côté, and Fraser-Thomas (2007), Salmela (1994), and Werthner and Trudel (2009) it appears that a lack of athletic experiences could be a hindrance to the development of a coaching career.

Although some coaches who lack athletic experiences have bucked the trend of not being able to coach at a level they could not reach as an athlete (Carter & Bloom, 2009) limited evidence exists as to whether playing a specific position influences an athlete's chance of being appointed as a head coach. With the exception of Grusky's (1963) Theory of Formal Structure which focused on baseball managers, there is little empirical evidence of the career pathways of high-performance coaches; in particular, of those who become head coaches of high performance hockey teams. Presently a high-performance hockey team is typically comprised of a roster that has approximately 14 forwards, 7 defensemen, and 2 goaltenders. With this in mind one would expect that there should be fewer high-performance head hockey coaches who formerly played goal in proportion to those who played other positions.

According to Kidd and MacFarlane (1972) hockey is more than a game, it is a Canadian institution. As an institution, hockey is worthy of study to understand its true significance (Roy 1974). As a result, this basic interpretive qualitative study employed a constructivist lens to examine the pathways of current head hockey coaches who had, as athletes specifically played goal. Through archival research and semi-structured interviews, the career pathways, learning situations, and athletic experiences of a selection of high performance head coaches working with teams ranging from the Canadian Junior Hockey League (CJAHL) to the National Hockey League (NHL) were investigated.

Chapter Two: Conceptual Framework

The study examined the pathways of high-performance head hockey coaches who formerly played goal. The primary research areas that informed this investigation were coaching research that pertains to defining the coaching context, career pathways, coach learning, and position played in relation to coaching opportunities. First, an examination of the confusion regarding the terms elite, expert, and high-performance coach will be given. Second, studies pertaining to coach pathways will be presented. Third, a review of the coach learning literature will develop a framework for a sub-section which will discuss athletic experience as a key learning situation for high-performance coaches. Finally, studies written about how the position within a team affords coaching opportunities will be discussed.

The Confusion Regarding the Terms Elite-Expert-High Performance Coach

Numerous studies have been conducted to identify what constitutes a good coach. There have also been a number of conceptual models developed that have been founded on coaching research to define elite and expert coaches (e.g., Côté, Salmela, Trudel, Baria, & Russell, 1995; Lyle, 2002). Additionally, numerous definitions and criteria have been established to characterize expert, elite, and high-performance coaches. Unfortunately, this has led to confusion in the literature as to the precise definition of each term.

A common research practice is to view coaches as expert based primarily on the performance of their athletes and the number of years of coaching experience (Wiman, Salmoni, & Hall, 2010). For example, Côté et al. (1995) defined an expert gymnastics coach as one who had at least ten years of coaching experience, coached at the provincial level or higher, developed at least one international athlete or two national athletes, and was recognized by the national association as a coach who develops elite athletes. Hardin (2000) defined expert high

school level coaches as having at least five years of coaching experience, having a record where at least 70% of competitions were won, holding two or more playoff titles, being recognized by their peers as an outstanding coach, and holding leadership roles via coach training clinics.

Another view presented by Côté & Gilbert (2009) is that expert coaches are able to demonstrate coaching effectiveness on a consistent basis. Such effectiveness is defined as “the consistent application of integrated professional, interpersonal, and intrapersonal knowledge to improve athlete’s competence, confidence, connection, and character in specific coaching contexts” (Côté & Gilbert, 2009, p. 316).

Bloom, Durand-Bush, and Salmela (1997) contend that in the coaching literature the difference between the expressions elites and expert coaches is not always clear because both terms have been used to identify research participants selected using similar criteria. According to Lemyre, Trudel, and Durand-Bush (2007)

Generally speaking, elite coaches tends to refer to coaches involved at the higher coaching level, the other being the recreational and the developmental-performance levels. *Expert coaches* describes a characteristic of the coaches and is often used to contrast with novice *coaches*. Three of the most common criteria used to select expert coaches are the coach’s winning record, involvement at the national and international level, and 10 years or 10,000 hr of coaching experiences. When these criteria are used, all expert coaches are elite coaches, but not all elite coaches are expert coaches. (p. 206)

The definitions of elite and high-performance coaches have also been used interchangeably in the literature. In general, the term elite coach refers to those coaches who are involved with athletes at highly competitive levels (i.e. above the recreational and developmental-performance levels) (Lemyre, Trudel, & Durand-Bush, 2007). According to Gilbert, Côté, and Mallett (2006)

coaches working at elite levels of competition (i.e. college) may specialize in fewer sports than coaches of recreation or developmental sport (i.e. high school). Additionally, elite coaches typically work full-time coaching, have athlete selection criteria that are demanding and restrictive as well as public performance objectives, and operate within a highly structured and formalized competition system (Gilbert et al., 2006).

High-performance coaches undertake many tasks that are related to producing winning performances in elite international competition, something which involves the highest levels of commitment by the coach and athletes in order to achieve public performance goals through participation in intensive planning, training and competition (Côté et al., 1995; Trudel & Gilbert, 2006). Furthermore, the “highly structured formalised environment increasingly requires that high-performance coaches work as coaches preferably on a full-time basis” (Mallett, 2010, p. 120). All coaches from the junior hockey level to the NHL fit the description of both an elite coach and a high-performance coach because they undertake many tasks and roles, have the highest levels of commitment, and work as coaches on a full-time basis. Since it is recommended by Hockey Canada (2013) that a coach at the junior level or higher must hold a High-Performance 1 certificate, the term high-performance will be applied to the coaches who will be investigated.

Coach Pathways

Life histories of coaches are fascinating and seem to be of interest to people outside of sport because coaches are often viewed as leaders in education, psychology, and organization (Walton, 1992). Walton (1992) suggested “Managers and administrators especially can benefit from the study of men who knew the art of winning with teams and individuals (p. xii). Lessons about life, leadership, psychology, and well being can be found in many books written by famous

sport coaches. Some of these include *Wooden on Leadership* (Wooden & Jamison, 2005), *Quiet Strength* (Dungy & Whitaker 2007), and *The Score Takes Care of Itself* (Walsh, Jamison, & Walsh, 2010). Additionally, life histories are of interest to those inside of sport because coach histories influence the development of coaching knowledge (Mallett, 2010). Currently, there is a small body of research that has identified the career development patterns of coaches (e.g., Erickson et al., 2007; Gilbert et al., 2006; Schinke, Bloom, & Salmela, 1995). To better understand the development of coaches, it is beneficial to take a life span perspective which focuses on their developmental paths and activities (Gilbert et al., 2006). Three studies that followed this perspective are now presented.

Schinke et al. (1995) conducted an examination of the developmental experiences of six expert basketball coaches. This study revealed seven chronological career stages: three stages as athletes and four as coaches. Early sport participation comprised the early experiences of coaches when they were beginner and early competitive athletes. In this stage coaches began to form their opinions on the various coaching styles they encountered. National elite sport was categorized as representing a university or province in national level competitions, or competing in the low levels of professional basketball. International elite sport was defined as being a member of a national basketball team. Novice coaching was described as coaching athletes at a non-competitive level (i.e. recreational) in a variety of sports or coaching one sport while teaching academics at a primary school. Developmental coaching positions were at the high school level and included higher level competitive tournaments where win loss records served as a form of evaluation. National elite coaching was discussed as being the level where coaches worked for successful university teams or coached provincial teams at national competitions. International elite coaching was featured as coaching with national teams and a prioritization of performance

results over a process orientation such as athlete development in the previous two coaching stages.

Building on Schinke and his colleagues' (1995) study, Erickson and his associates (2007) broke down coach development into five stages beginning with the first stage at age 6 (i.e. diversified early sport participation). This stage was classified as participation in many sports, both team and individual, and most often on a recreational basis. The second stage, competitive sport participation, occurred at approximately age 13. At this stage, the athlete played at least one sport at the competitive level and for team-sport coaches, it was the stage in which most formal leadership opportunities (i.e. being a captain) occurred. The third stage, highly competitive sport participation and introduction to coaching, occurred at age 19. At this stage the main focus was still on the individuals' sport participation, but it is during this stage that most coaches first gained coaching experience. The fourth stage, part-time early coaching, occurred at approximately age 24 as the coaches competitive athletic participation ended. This is when coaches often began other major activities (e.g., job, graduate studies) while coaching part-time. During this level most coaching was done at the developmental level or as an assistant coach at the high-performance level. The fifth stage occurred at approximately age 29 and was characterized as obtaining a high-performance head coaching position which was often a full-time, paid position.

Gilbert et al. (2006) conducted a quantitative examination of elite coaches' developmental pathways and activities. It was found that across several sports a minimum of several thousand hours of athletic participation for an average of at least 13 years was a common characteristic of successful (i.e. elite) coaches. In addition the coaches of elite levels (i.e. college) were found to be highly skilled athletes in relation to their peers. As a result, this could suggest

that the coaches from the sample had lengthier athletic careers thus allowing them to gain more coaching knowledge.

Having described these three developmental pathway studies comparisons and contrasts will be drawn. A model of athletic experiences by Erickson et al. (2007) begins with diversified early sport participation at the age of 6 and runs to highly competitive sport participation and introduction to coaching at the age of 19. This appears to be consistent with the finding of Gilbert et al. (2006) that an elite coach holds an average of 13 years of athletic participation experience. While Gilbert and his colleagues' study may be similar in regards to the number of years of experience an elite coach requires it does not provide a road map for coach pathways like the models of Erickson et al. and Schinke et al. (1995). Erickson and his associates' model is quite different than model presented by Schinke et al. in terms of overall descriptiveness. The model by Schinke et al. provides a very broad first stage of athletic experiences which immediately transitions into national elite sport while Erickson et al. provide a very descriptive first stage which includes an age range of the athlete participating in that stage. The variation in these models can possibly be related to the types of coaches studied. For instance it appears that Schinke et al. studied coaches who had athletic experiences on the national and international stage prior to making a transition into coaching while the coaches in Erickson et al. did not appear to participate in sport on the national or international stage.

It is important to recognize that not every high-performance hockey coach's pathway to the high-performance level will be similar and nor will they all follow one model previously presented in the literature. In an investigation of high-performance coach learning paths Werthner and Trudel (2009) found that the lifelong learner coaches, had different learning experiences and therefore their learning paths were idiosyncratic. For example, one coach

finished his competitive athletic career in the highly competitive athletic participation and introduction to coaching stage (Erickson et al., 2007) at the age of 24 and entered the coaching field, while another coach continued his athletic endeavour to International Elite Sport level (Schinke et al., 1995) until the age of 35 and then move into coaching. In fact Schinke et al. found that none of the coaches who reached the National Elite coaching level shared common pathways. The coach pathway models presented above do provide a foundation for the study of pathways of high-performance hockey head coaches; however Werthner and Trudel (2009) remind us that often the pathways of high-performance coaches are idiosyncratic.

Learning Situations that Contribute to Coaches' Development

To date some authors of studies in coaching have mentioned that coaches play an important role on a sports team, and that coaching is complex (Cushion et al., 2003; Lyle, 2002). As a result coaches need to develop a solid foundation of knowledge in coaching athletes and, more importantly, knowledge that is specific to the sport they choose to coach (Cushion et al.; Lyle, 2002). In order to be an effective coach Côté and Gilbert (2009) stated that coaches must consistently apply integrated professional, interpersonal, and intrapersonal knowledge to improve athletes' competence, confidence, connections, and character in specific coaching contexts. Professional knowledge can be exemplified in coach decision-making competencies and the coach's ability to articulate the rationale behind his decisions (Gilbert & Côté, 2013). Interpersonal knowledge or emotional intelligence can be described as a coach's ability to recognize and use emotions to manage his relationships with his athletes, assistant coaches, as well as parents, and other professionals (Gilbert & Côté, 2013). Intrapersonal knowledge or coach reflection is "the understanding of oneself and the ability for introspection and reflection (Côté & Gilbert , 2009, p. 311).

To aid the process of obtaining coaching knowledge and sport specific knowledge, various formal programs have been established to assist in coach learning. Examples of these programs are the National Coaching Certification Program (NCCP) in Canada, the National Coaching Accreditation Scheme (NCAS) in Australia, the National Coaching Certificate (NCC) in the United Kingdom (UK), and the American Sport Education Program in the United States of America (USA) (Wright, Trudel, & Culver, 2007). In Canada, hockey coaches are required to follow the NCCP model through Hockey Canada's system of development. The stream-based program is a series of clinics that enable coaches to build their coaching tools and knowledge of the game in order to work more effectively with their players (Hockey Canada, 2013). To be classified as a high-performance hockey coach, aspiring coaches must participate in a week long coaching clinic that includes a series of lectures, on ice sessions, and tests (Hockey Canada, 2013). To be deemed eligible to participate, prospective coaches must have been a head coach of an 'AAA' team at the minor hockey level and continue to be a head coach at the same level for the following season. These requirements suggest that to become classified as a high-performance hockey coach, prospective coaches must fit certain criteria and have the desire to continue coaching at a high level.

Due to the large number of coaching programs established, numerous investigations have been undertaken to understand how coaches learn to coach. Some have focused on the learning of youth sport coaches (e.g., Lemyre et al., 2007; Wright et al., 2007), while others have focused on the development of expert coaches (Werthner & Trudel, 2006). These studies have suggested various situations in which a coach may learn. Some of these studies (Werthner, & Trudel, 2006; Wright, et al., 2007) have categorized coaches' learning experiences to help researchers better understand the learning process.

Werthner and Trudel (2006) developed a framework for coach learning from a multiple case study. This constructivist framework was based on the supposition that each coach's development was distinct, suggesting there is a variety of situations in which a coach can learn. They found that coaches gain knowledge through three types of learning situations: mediated, unmediated, and internal. Mediated learning situations occurred when learning was directed by another person (e.g., coaching courses, formal mentoring, coaching conferences); unmediated learning situations were classified as having no instructor and with the learner taking the initiative for choosing what to learn (e.g., discussion with other coaches, the Internet, meeting with athletes); internal learning situations were described as a reconsideration of ideas in the coach's cognitive structure (e.g., reflective journal [Moon, 2006], having a personal coach [Trudel & Gilbert, 2013]). These learning situations suggest that a wide variety of learning opportunities are available for individual coaches to construct coaching knowledge.

Like Werthner and Trudel (2006), Wright and colleagues (2007) deciphered the learning situations reported by coaches and placed them into categories. They reported the situations of youth hockey coaches as mediated, and unmediated. Mediated learning situations were classified as learning that was aided directly by another person or through the use of a medium that simplifies the material of teaching (i.e. NCCP, coaching clinics, formal mentoring). Unmediated learning situations were described as the learner being responsible for choosing what to learn about something. This occurred through use of books and videotapes, personal experience related to sport, family, and work, face-to-face interactions with other coaches, and the Internet. Each category of learning situations appears to have a unique role in the development of a coach. This suggests that coach education should include a combination of all the learning situations.

The research by Wright et al. (2007) led to the design of a study (Lemyre et al., 2007) in which data were collected on youth-sport coaches from three sports (ice hockey, baseball, soccer) to investigate coaches' learning situations in more detail. The learning situations reported during the participating coaches first three years as a head coach were training courses, resource materials, the Internet, and interactions with assistant coaches, managers, league supervisors, players, parents, friends, family members, and rival coaches. Additionally, it was suggested that the main source of reference for coaches to train their teams during their first year of coaching was their previous athletic experiences. This suggests that coaches who had previous athletic experiences had already had the chance to develop sport specific knowledge. Indeed, Sage (1989) earlier found that ex-athletes who became high school coaches had undergone a type of informal apprenticeship involving observation of their own coaches, which led to the acquisition of some nascent coaching knowledge.

The above body of literature dedicated to coach learning (Lemyre et al., 2007; Werthner & Trudel, 2006; Wright et al., 2007) provides a basis for classifying coach learning through varying situations. Regardless of which system of categorization is used, there will always be a need for coach development because "regardless of their current level of expertise, all coaches can improve their coaching skills" (De Marco & McCullick, 1997, pp. 39-40). Therefore it is imperative that we understand how coaches develop knowledge so they can be provided with the best training possible. Clearly, it is not a matter of which form of education and learning is superior, but acknowledging the unique contributions that all forms can make to coach development and certification (Mallett, Trudel, Lyle, & Rynne, 2009).

Athletic Experience as an Important Coach Learning Experience

Among the learning situations reported, previous athletic experience is of particular interest to this study. Authors hold varying opinions on whether athletic experience is an important piece of coach learning experience. Young, Jemczyk, Brophy, and Côté (2009) suggested that to become a local club track and field coach, no prior athletic experience in the sport coached is necessary. However, they also found that experience as an athlete in the same sport is a prerequisite experience for coaches to progress beyond the local club level to the senior club, provincial, or national levels (Young et al., 2009). These findings suggest that to progress to an elite level of coaching previous athletic experience is required.

In contrast to the notion that previous athletic experiences are a prerequisite for coaching, Carter and Bloom (2009) found that former experience as an athlete in the same sport is not always a requirement for coaches to progress to the elite level (i.e., University sports); however, the career progressions of the coaches who lacked athletic experience were different from other elite coaches who held previous elite athletic experiences. The six coaches investigated stated that their lack of or limited elite athletic experience was an initial hindrance to their development (Carter & Bloom, 2009). The reason for this might be that they were unable to draw upon expert athletic experiences to develop coaching knowledge, philosophy, and belief (Salmela, 1994). Despite their different career progressions, coaches who lacked athletic experiences at the same level they coached shared many similar traits and characteristics (e.g., excellent teaching, communication, and organization skills) with coaches holding athletic experiences at the same level (Carter & Bloom, 2009). The only difference found between the two groups of coaches was that the coaches lacking the athletic experiences tended to have to work harder to improve their teaching skills and practice planning than the coaches who had athletic experiences (Carter &

Bloom, 2009). This implies that coaches with previous athletic experiences at high levels might have had a less arduous path to the high-performance levels of coaching.

In the above mentioned study of the idiosyncratic learning paths of elite Canadian coaches Werthner and Trudel (2009) reported athletic experience as one of the five common learning situations deemed important by their participants. The background's of the 15 coaches studied showed that the majority of them (n=14) had previous athletic experiences upon which they could draw for coaching knowledge. However, one of the coaches had no previous athletic experience and had been coaching full-time for more than 20 years (Werthner & Trudel, 2009). This hints that although being an athlete does provide specific coaching knowledge, previous athletic experience is not essential to become a full-time high-performance coach even at the highest level.

Position within a Team as a Factor that Affords Coaching Opportunities

Limited studies have been conducted on the influence an athlete's playing position within a team has on the head coaching opportunities afforded to the athlete. The Theory of Formal Structure developed by Grusky (1963) attempted to explain some of the factors that impact leadership recruitment in sports. The theory was supported by an examination of three interdependent features of positions within baseball teams: spatial location, nature of task, and rate of interaction. This theory suggested:

All else being equal, the more central one's position: (1) the greater the likelihood dependent or coordinate tasks will be performed and (2) the greater the rate of interaction with the occupants of other positions. Also, performance of dependent tasks is positively related to frequency of interaction. (Grusky, 1963, p. 346)

Central position was defined by Roy (1974) as

The closeness of a member to the center of the group's interaction network. This refers simultaneously to the frequency with which a member participates in interaction with other members, the number or range of other members with whom he interacts, and the degree to which he must coordinate his tasks and activities with other members. (p. 5)

Based on this definition the positions on an ice hockey team that interact with other positions the most, in order, are centers (interacting with two defense, two wingers), defense (interacting with one centre, one defense, and one goaltender), wingers (interacting with one center and two defense), and goaltenders (interacting with two defense).

Using Grusky's (1963) model, Roy (1974) was able to conduct an investigation focusing on hockey coaching opportunities based on position played. Roy found that, since the 1917-18 NHL season (56 year time span), of the 97 head coaches 3 played goal (3.1%), 31 played defense (32.0%), 27 played center (27.8%), 17 played wing (17.5%), 17 had no professional experience (17.5%), and 2 were unknown (2.1%). Additionally, Roy conducted interviews with 80 retired NHL players to determine their perceptions of the position that requires the most technical knowledge of the game. It was found that the retired players believed the positions that require the most technical knowledge are, in order, center (25%), defense (21.2%), goaltender (8.7%), and wing (0.0%). These findings suggest that, based on the high level of interaction (centrality) a centreman or defenseman has with players of other positions on their team and the technical knowledge required to play these positions those who play center or defense might be more likely to gain coaching knowledge through athletic experience and consequently coaching opportunities over those who played wing or goal.

More recently, studies have been conducted to determine whether the race of an athlete affords or impedes coaching opportunities (Braddock, Smith & Dawkins, 2012; Chu & Segrave,

1981; Goff & Tollison, 2008; Madden, 2003). It was found that an athlete's playing position can play a role in the selection process. For instance, according to Chu and Segrave (1981) players who occupied the position of guard in basketball (i.e. on National Basketball Association or NCAA teams) are more likely than forwards and centres to have access to the position of head and assistant coach. Additionally, since white players are typically found at the guard position, whites are more likely than blacks to be head and assistant coaches. Chu and Segrave (1981) suggested that the position of guard leads to coaching positions because it attracts individuals with leadership qualities, may develop abilities that will be useful in future leadership roles, may be a role into which certain types of players are channelled by their coaches, and it may facilitate leadership opportunities because of the coordinative and dependent tasks required of the guard position.

Limitations of Previous Research

Given the current state of the literature on coaching, there are a number of areas that require further investigation. One shortcoming particularly related to Roy's (1974) study is the timing (1917-1974). During that time the NHL saw a fluctuation of three to ten teams from 1917 to 1941 (The Internet Hockey Database [HockeyDB], 2013). From 1942 to 1966 the NHL only featured six teams (i.e. the original six) until its expansion to 12 teams in 1967, 14 teams in 1970, and 16 teams in 1972. Until the 1950-51 season teams only employed one goaltender meaning there were only approximately six goaltenders to draw from, at any one time during this era, for coaching positions. Even when NHL teams adopted the idea of having two goaltenders the number of goaltenders in the NHL available for coaching positions only doubled to 12 from 1951-1967. As a result of expansion the number of goaltenders in the league grew from 12 to 28 to 32 in the matter of four years.

Today, after additional years of expansion (1978, 1979, 1992, 1993, 1998, 1999, 2000) the NHL features 30 teams (HockeyDB, 2013), which translates to 60 NHL goaltenders who could be chosen for coaching positions once retired. The NHL has grown in the number of players (specifically goaltenders by 1000 percent) which suggests if Roy's (1974) study were conducted today the findings might be different.

Another limitation is the paucity of research on position played and its relation to developmental pathways and learning experiences of coaches. In their study Werthner and Trudel (2009) only included two team sports coaches in which position played would be a factor in coaches' learning experiences. Additionally, hockey has changed so much in the last 13 years. For example, 13 years ago NHL general managers were just beginning to hire part time goaltending consultants to work with their team's goaltenders. Approximately 8 years ago general managers began to hire video coaches to manage the team's game film and prepare it for the head coach to view. Presently, all teams from major junior (i.e. OHL, QMJHL, WHL) to the NHL now employ full time goaltending coaches with some teams employing assistant goaltending coaches to work with a team's prospective goaltenders. Teams also employ full time video coaches who use the latest video technology to prepare game film for the head coach and his team. These developments have changed the way coaches coach because they provide more avenues to provide feedback to players. As a result more research needs to be conducted on how a team sport coach who played one position learns how to coach other positions.

Personal Interest

When I entered my junior year as a National Collegiate Athletic Association (NCAA) hockey player at Potsdam State University I found myself being heavily relied on, by my teammates and coaches, to provide a source of leadership for all off-ice activities. This included

pre-game preparation, community involvement, and strength and conditioning. I always thought that once I completed my undergraduate degree that I would continue to play hockey at the minor professional level in North America or Europe. However, due to the confidence my coaches and teammates instilled in me I began thinking about a career in coaching. As graduation approached I decided that it would be best to pursue a master's degree and get a head start on a potential career in coaching. As a result, I applied and was accepted to the University of Ottawa's coaching pedagogy program. Coupled with this I sent numerous assistant coach applications to junior and midget AAA hockey teams in the Ottawa area.

When interviewed for the assistant coaching positions I received the same feedback each time; the team's board of directors thought, based on my playing experience, it would be in my best interest to coach the team's goaltenders. This was rather frustrating since my objective was to be an assistant coach who could work with other positions aside from goaltenders. Fortunately, one team was the exception and interviewed me for an assistant coach position. Upon review of my interview I was awarded the position as the assistant coach of the Ottawa Junior 67's Midget AAA hockey club. Unfortunately, four months after the interview I was introduced to the players and their parents as the team's goaltender coach. My previous frustration returned. As a result, I felt it was necessary to immediately inform the head coach of the team that I wanted to be more than a goalie coach. Additionally, I informed him of my goal to have a career in hockey as a head coach and that in order to continue toward that goal I needed to be assigned a broader range of roles to expand my coaching knowledge. Fortunately, he was quite receptive. Still I felt there must be other more expedient pathways for a former goaltender to become a head coach without being continuously marginalized as a goaltender coach. As a result, I decided that not only this could be an interesting topic for a master's thesis for personal

reasons but it had the potential to add to the body of literature related to coach pathways because this topic has yet to be investigated.

Chapter Three: Research Goals

Research Goals

The goal was to explore how former ice hockey goaltenders become high-performance head hockey coaches. The uniqueness of head coaches who formerly played goal merited a qualitative research design because there are so few former goaltenders (2) that comprise a hockey team's roster in comparison to forwards (12-15) and defensemen (6-8). As a result, what helps goaltenders become high-performance head hockey coaches might be different than what works for coaches who played forward or defense. Using qualitative methods to study head coaches who were former goaltenders, this research was conducted to understand how to become a high-performance head hockey coach. Therefore 11 high-performance head hockey coaches who formerly played goal were interviewed, and the data were thematically analyzed.

Research Questions

The study was guided by three research questions: (a) What are the career pathways that former goaltenders take to become high-performance head hockey coaches? (b) What learning situations have contributed to their development as a coach? (c) How have the coaches' previous athletic experiences afforded certain coaching opportunities?

Chapter Four: Methodology

Research Design

Epistemology

This study used a constructivist epistemology, which posits that meaningful reality is constructed in the mind of the individual (Crotty, 2010). According to Lincoln, Lynham, and Guba (2011) knowledge is constructed through lived experiences and through our interactions with members of society. As a result, it is important that the researcher participate in the research process with study participants to ensure that the knowledge produced is reflective of the study participants' reality. In this case, the inquirer and inquired will be fused into a single entity that possesses knowledge (Lincoln et al., 2011). This suggests that the findings are the creation of the process of the interaction between the researcher and the researched. Since individual coaches' pathways were explored, the epistemological viewpoint that each person's interpretation of his or her world is valid and unique is warranted. Constructivism aligns with this viewpoint by promoting an uncritical attitude towards individual meaning-making processes (Crotty, 2010).

A basic interpretive qualitative approach

Given the constructivist viewpoint for this study the methodology chosen was Merriam's (2009) basic interpretive qualitative approach. Merriam said that in a basic interpretive qualitative study "the researcher is interested in understanding the meaning a phenomenon has for those involved" (p.22). As a research design, data from a basic interpretive qualitative study are collected through interviews, observations, or document analysis (Merriam, 2009). Merriam stated that "The analysis of the data involves identifying recurring patterns that characterize the data" (p. 23). The findings from the data are then presented as themes and categories (Merriam, 2009).

According to Merriam (2009), researchers conducting a basic interpretive qualitative study are interested in three things: “(1) how people interpret their experiences, (2) how they construct their worlds, and (3) what meaning they attribute to their experiences” (p. 23). This methodology allows the researcher to uncover and interpret the meanings of how study participants make sense of their lives and worlds (Merriam, 2009). As a result, this methodology was appropriate for this study because I was interested in understanding how former goaltenders explained how they became high-performance head hockey coaches.

Procedures

The collection of data for this study included a two stage process. During the first stage (archival analysis), I used HockeyDB (2013), Elite Prospects (2013), and United States College Hockey Online (USCHO) (2013) to (a) Find the athletic histories of all head coaches who have coached a high-performance hockey team in the past 10 years (2002-2012) from the CJAHL, CHL, CIS (men’s and women’s), NCAA (men’s and women’s), ECHL, AHL, NHL and (b) determine the number of coaches who formerly played goal that could be potential study participants for this investigation. Once the number of coaches available for this study was determined and ethical approval was obtained, a search for current and former head coaches’ contact information was completed through team websites or personal communications. In total 49 former or current head coaches (48 male, 1 female) were identified as potential study candidates. Of the 49 head coaches I was able to find some form of contact information (i.e. team office email address and/or phone number, head coach email address and/or phone number) for 41 of them via their teams’ websites. Once the contact information was obtained and placed in a database each coach was sent a recruitment letter by e-mail. Of the 41 teams that made contact information available on their websites 28 of those websites contained direct contact information

for the head coach. I was able to speak directly with 17 of the 41 head coaches who had some form of contact information available online. Of those 17 there were 6 who were dropped because they discontinued responding to phone calls or emails. Of the 11 head coaches interviewed, direct contact information was available for 7 through their respective teams' websites. For communication to be established between myself and two other coaches their contact information was obtained by sending a recruitment e-mail to their teams' general inquiries e-mail addresses. For the two final coaches I was able to obtain their contact information through personal acquaintances. I was able to garner one of these last two coaches' contact information through a friend who worked for someone who was very close to the coach. I was able to contact the final coach by calling his team's general inquiries phone number. It turned out that the person answering the calls was from my home town and knew a lot of the same people as I. As a result, he helped me by sending the coach the recruitment letter and my phone number; and the coach called me back within a week.

To ensure my self-established timelines were met I set the following recruitment guidelines for myself. If a coach did not respond after one week he was sent a follow up e-mail; if he did not respond to the follow up e-mail after one week the coaches were contacted by phone; if the coach did not answer the phone a message was left; if the call was not returned after one week a final phone call was made to initiate contact. If no contact was made after the second phone call the coach was removed from the list of potential study candidates. For the coaches who did respond with continued interest to participate in the study a time was set up to conduct an interview via telephone. In total 11 coaches were interviewed (stage two) with the interviews ranging from 29 minutes to 90 minutes. Only one interview per coach was conducted given the

time restraints of a masters' study and especially because it was believed that these high profile coaches would be difficult to contact at later dates (i.e. during the season).

Sampling

The coaches were recruited by using convenience and snowball sampling. According to Weiss (1994) there are situations in which convenience sampling is the only feasible way to obtain study participants – for instance, in attempting to learn about a group that is difficult to gain access to, or a category of people who are relatively rare in the population and for whom no data on membership exist. Convenience sampling was used for nine of the coaches but in order to recruit the last two snowball sampling was used. Creswell (2013) stated that snowball sampling occurs when cases are identified through people who know people who know what cases are information-rich. This strategy, aimed at maximal variation (Creswell 2007; Miles & Huberman, 1994) augmented the original sample of head coaches. To create maximal variation it was important to find coaches who possessed different characteristics. These characteristics included: being a male or female, currently at different stages of his/her coaching career (i.e. beginning, middle, end, retired), having coached at different levels (i.e. professional, collegiate, junior), being born in a different country, having played at different levels (i.e. professional, collegiate, junior), being different ages (i.e. 30-39, 40-49, 50-59, 60-69), and having different coach pathways (e.g., worked way up ranks, only coached one level). It should be noted that while maximal variation was the goal for this study the list of potential study candidates was rather small. As a result, all possible study participants were contacted an equal number of times without prioritizing maximal variation. Fortunately, perhaps by coincidence, the coaches who were available to participate had very different demographics which allowed for much variation in the results.

Participants

Eleven high-performance head hockey coaches who formerly played goal, 10 men and 1 woman ranging from 32-60 years of age participated in this study. All of the coaches met the following criteria: a) head coach of a hockey team at the high-performance level at some point throughout the past 10 years, and b) had played the position of goaltender as a player. The coaches represented a wide range of levels (n=1 unless stated): NHL (n=3), ECHL, CHL, CIS Men's, NCAA Division 1 Women's (n=4), and NCAA Division 3 Women's. At the time of the interview, 8 of the 11 were employed full time as head coaches, one as an assistant coach, and two were no longer coaching at the high-performance level. All of the coaches played high-performance hockey as goaltenders with 9 of the 11 having played collegiate hockey and 4 of the 11 having played professionally. Six of the coaches were born in Canada while the other five were born in the United States.

Data Collection

Archival analysis

The first stage of this study employed archival research to determine the number of former goaltenders who were high-performance head hockey coaches at some point over the past 10 years. The common practice in sport psychology studies has been to make use of interviews as the main sources in developing interpretations of a phenomenon (Culver, Gilbert, & Sparkes, 2012). Archival data can be used to help develop the interpretations of the research findings (Fischer & Parmentier, 2010), but for this investigation, archival research was employed at the beginning of the data collection process to determine the number of study participants available for the sample. Starting with the CJAHL to the NHL, three internet hockey databases (i.e. HockeyDB, Elite Prospects, and USCHO) were used to retrieve the athletic histories of head

coaches, who formerly played goal, who coached at the high performance level within the past 10 years (2002-2012). The athletic and coaching history of each coach was then compiled in a reference database.

Semi-structured interviews

The semi-structured interviews, which occurred prior to the start of the 2012-2013 hockey season, were conducted by the researcher (see Appendix A). According to Wengraf (2001) semi-structured interviews yield much more data because this form of interview includes a mix of more and less structured interview questions. Additionally, there is a great deal of flexibility because there is no predetermined wording or order in which the questions must be asked to the interviewee (Merriam, 2009). The interviews were conducted by telephone because the coaches who participated were located in a variety of geographical areas. All interviews were audio-recorded, transcribed verbatim, and the transcripts were sent to the coaches for member checking. In addition to the transcripts, the coaches were sent approximately three probe questions in the e-mails sent. These questions varied based on the responses given by each coach during the original interviews. All the coaches responded to the probing questions, three coaches requested some adjustments be made to the spelling of names mentioned throughout the interviews, and one coach wanted to confirm his anonymity in the study.

Data Analysis

As mentioned, all of the coaches' interviews were transcribed verbatim before being analyzed by way of thematic analysis (Braun & Clarke, 2006) using NVivo10 software (QSR International, 2010). According to Braun and Clarke (2006), thematic analysis is based upon the discovery of the underlying themes within a text, allowing for a description of how patterns develop within the text. Being a novice researcher, thematic analysis was appropriate for this

study because it is the first method of data analysis that should be learned by a researcher. Braun and Clarke (2006) provide six steps for analysis; familiarization with the data, generation of initial codes, the search for themes, the review of themes, the definition and naming of themes, and the production of the report.

The first step, familiarization with the data, started with the transcription of the interviews and a number of readings of the transcripts to understand the data. Understanding the data included taking note of any patterns and perceptions related to the coaches' pathways and learning experiences, and their opinions regarding their athletic experience and the influence they had on their coaching careers. The transcripts were read deductively and inductively, meaning the research questions, prior research on coaching literature, and the coaches' accounts of their experiences informed the analysis. Any first impressions and notes about the data were recorded as annotations in the NVivo program to serve as documentary evidence for the sequence of activities. For instance, one coach engaged in a discussion about a goaltender's position on an ice surface in relation to forwards and defensemen and how it can aid a goaltender's understanding of the game. However, the coach also mentioned that while the goaltender's understanding of the game might be influenced by his position it does not mean he understands systematic play. As a result, I wrote two notes about his opinion. One note stated that his viewpoint on the subject was somewhat similar to those who mentioned that a goaltender's position on the ice can influence his understanding of the game. The second was that his viewpoint was also slightly different because positioning on the ice surface does not automatically mean a goaltender understands an opposing team's systematic play.

The second step, generation of initial codes from the data, was based on the research questions and the notes made during the first stage. According to Braun and Clarke (2006) this is

when the data get organized into meaningful groups. This was guided by a deductive examination of the data with an allowance for inductive coding. For example, a code created from deductive examination of the data was *Highest level played and its influence on coaching opportunities*. An example of an inductive code (or coded “NVivo”) was *Two for the price of one*. This was created after one coach stated that team’s would hire former goaltenders to act as assistant coaches and goaltender coaches as a means to save payroll money.

The third step involved searching for themes. Braun and Clarke (2006) suggested that during this phase “essentially, you are starting to analyse your codes and consider how different codes may combine to form an overarching theme (p. 89).” To determine themes the codes were separately analyzed and then, using NVivo, placed in hierarchical representations to clarify the relationship between the codes and themes and between the themes and subthemes. As an illustration the codes *television, scouting, player interactions, observation, internet, coach interactions*, and *books and videotapes* were grouped together under one overarching theme based on literature discussed above.

The fourth step started with an initial list of themes that had been created. The themes were then reviewed and checked against data extracts to ensure they accurately represented the data. This step involved two levels of reviewing and refining themes: considering all the collated extracts for each theme and whether they appeared to form a coherent pattern, and considering the validity of individual themes in relation to the data set (Braun and Clarke, 2006). During this phase of the analysis, the data set was re-read to check for coherency and to code any missed data that were relevant to the themes that had emerged in the previous phase.

The fifth phase involved defining and naming the themes. This began when the hierarchy of codes created from the third phase were considered coherent with the data set. During this

stage names and definitions were created for each theme so that the meaning of what each theme was (and was not) was evident (Braun & Clarke, 2006). For example, the codes *television*, *scouting*, *player interactions*, *observation*, *internet*, *coach interactions*, and *books and videotapes* were grouped together under the overarching theme *Conscious Effort*. The code *Family* was placed into the overarching theme labelled *Unconscious Effort*. *Conscious Effort* and *Unconscious Effort* were then placed into a higher overarching theme named *Unmediated Learning Situations* which was then placed in a final overarching theme titled *Learning Situations*. This grouping of codes into themes was derived from Trudel, Werthner, and Culver's (2012) description of unmediated learning situations and the categories in which unmediated learning situations fall into.

Braun and Clarke (2006) suggested that the final stage (producing the report) must go beyond an explanation of the data; instead an argument needs to be made in relation to the research question. As a result, it was not enough to summarize and describe the findings. An in-depth analysis of the themes' meanings and implications has been written below to relate them to the research questions and literature.

Quality and Validity in Basic Interpretive Qualitative Research

Following Maxwell's (2005) recommendations I asked myself the following questions in regards to how I might be wrong.

1. **Demographics:** Since I was only interested in studying high-performance head hockey coaches who were former goaltenders, I found no reason to study coaches who played different positions. Most coaches from the CJAHL to the NHL levels are male, so I found no validity threat to my study by all but one of the coaches studied being male.

2. Coach selection: Did I interview enough coaches? Did I bias the data by who I interviewed? I tried to interview coaches who have different coaching pathways according to the online hockey databases. I interviewed coaches who were: (a) Currently and formerly at all the levels including and between (i.e. Quebec Major Junior Hockey League [QMJHL], Ontario Hockey League [OHL], Western Hockey League [WHL], NCAA, Canadian Interuniversity Sport [CIS], Central Hockey League [CHL], East Coast Hockey League [ECHL], American Hockey League [AHL]) the CJAHL and NHL, (b) at the beginning of their high-performance head coaching careers, (c) at the end of their high-performance head coaching careers, and (d) finished their high-performance head coaching careers.
3. How will I know what the coaches said is true and not just what I wanted to hear? To make the coaches comfortable enough to be honest with me I assured them anonymity. Additionally, I used the information provided by the archival analysis to guide the interviews with the coaches. This provided the coaches with an opportunity to recall points in their career that they may have forgotten.

In addition to Maxwell's recommendations, Merriam (2009) contends that qualitative research operates on the assumptions that "reality is holistic, multidimensional, and ever-changing; it is not a single, fixed, objective phenomenon waiting to be discovered, observed, and measured as in quantitative research" (p.213). Some strategies offered by Merriam for increasing credibility in qualitative research are triangulation, member checks, researcher reflexivity, peer review, and adequate engagement in data collection. Triangulation was achieved in this study by using the multiple data sources of archival analysis and interviews. To member check, the interview transcripts were sent back to the coaches for their comments, and limited changes were

requested by only four coaches. Maxwell (2005) considers this a form of data collection because it is the most important way of ruling out the possibility of misinterpreting the meaning of what participants say and do and the perspective they have of what is occurring. Additionally, it is an important way for a researcher to identify personal biases and misunderstandings of what was observed (Maxwell, 2005). Reflexivity was attained by taking notes about impressions, and assumptions on the NVivo10 software when analyzing the data. Adequate engagement with the data collected was reached because I conducted and transcribed all of the interviews and analyzed all the archives available.

Maxwell (2005) stated that traditionally what a researcher brings to an investigation from his or her background has been treated as “bias”, something whose influence needs to be eliminated from the design, rather than a valuable component of it. Unfortunately, “Separating your research from other aspects of your life cuts you off from a major source of insights, hypotheses, and validity checks” (Maxwell, 2005, p. 38). I am in a unique position to conduct this research because of my dual role of active head coach who formerly played goal and researcher, and this positively influences the validity of the research. After 16 years of playing and 10 years of coaching experiences in competitive hockey I have amassed significant primary experience and knowledge about the culture of coaching hockey. Bishop, Burnet, Farrow, Gabett, and Newton (2006) contend that wide gaps exist between the practitioner coach and the researching academic. To reduce this gap it has been recommended that researchers act as coaches (Bishop et al., 2006). Former coach research participants have claimed that “researchers with coaching experience would have a better appreciation of the issues facing coaches” (Williams & Kendall, 2007, p. 1581). As a result, the role I have as an active head coach who formerly played goal privileges my academic work because those who have not lived this athletic

and career pathway have not had the chance to truly be immersed in the experience. The fact that I have amassed ten years of coaching experience in different capacities is relevant, as my familiarity with transitioning from playing goal to becoming a head coach is a major source of insight.

To create personal awareness of the potential biases and assumptions I had toward the subject of this paper I participated in a bracketing interview (See Appendix B). During the interview, in response to whether goaltenders would make good coaches I found my first assumption:

“Anyone can be a great coach, playing experience doesn’t matter – look at Ken Hitchcock. However, if we look at goaltenders specifically I am on the fence about it. One side of me says that they could know a lot about the game because they are positioned in such a way that they can see the whole length of the ice. The other side of me (my playing side) says that as a goaltender who aspires to be a head coach you have to work so much harder than a forward or defenseman to learn team tactics. I remember when I played I never paid attention to the coach when he was drawing up drills or doing team video because all I had to worry about was my own game, stopping the puck, and shooter’s tendencies. I feel that a lot of coaches who formerly played goal would be in the same boat as me.” (Travis)

My second assumption was found in response to a question regarding whether the highest level the head coach played at was a factor in the level he could attain as a coach. At no point during my response did I mention that if the head coaches played in the NHL they would have a better chance of coaching in the NHL. However, when reflecting upon my response to this question I felt that the highest level played at would influence the opportunities a head coach

might be afforded throughout his or her career. I felt that it would be tough to secure head coach positions for coaches who lacked athletic experiences at higher levels. Likewise I also thought that the position played (i.e. goal) would play an important role in the coaching opportunities afforded to former goaltenders. I felt that team's would not want to hire coaches who played goal because they lacked experience in system play and knowledge of strategies.

The third bias I had was probably the most important one and thinking about it makes me remember what originally sparked my interest in the topic of study for my thesis. I was asked what I thought the coaching pathway of former goaltenders looks like. My response was

“I think that in comparison to forwards and defensemen former goaltenders had to start at a lower level of coaching. Look at me for instance, I have had to start at a lower level and I think that former goaltenders had to start at either the midget or junior level, whereas former forwards or defensemen probably could have jumped into an assistant coaching role at the pro level right away just because they are used to playing certain systems and obviously when you are coaching a bench of forwards and defensemen it is a lot different. You aren't just there talking to the goalie on the ice and the backup goalie on the bench. You have to deal with 6 defensemen, 12 forwards so I feel like for goaltenders they would have to start a lot lower to get used to it.” (Travis)

To understand my assumptions I needed to ask myself why I held the above beliefs, how I accepted them to be true, and what or who convinced me to have these beliefs in the first place. The constructivist way of thinking holds that there is no one correct answer, truth, or meaning (Crotty, 2010). Instead, meaning is constructed by each person's interpretation of an experience based on previous experiences and interactions (Crotty, 2010). The meaning and reasoning for my assumptions found in my bracketing interview transcript meant something completely

different to me from the time I participated in the interview to the time when I allowed myself to reflect on the transcript and my findings. By realizing how important reflection is I have been able to analyze each coach's pathway.

Ethical Issues

The coaches risked me finding out something that they may not want repeated publicly. To minimise the fear of exposure, each coach was assured anonymity in any representation of the study findings. All the names of coaches and persons discussed during interviews were assigned pseudonyms. Additionally, all team names, circumstances, and cities played or coached in that were discussed have been given pseudonyms. Further, coaches were assured that no one other than my thesis supervisor and thesis committee members would know of their identity unless they specifically gave me permission to do otherwise.

Chapter Five: Results

The results have been divided into the following five sections corresponding to the research questions: (a) the coaches' individual pathways beginning with their athletic careers and ending with their current or last position as a coach, (b) the coaches' reflections on the coaching area they lacked most knowledge in when making the transition from playing goal to becoming a coach, (c) the coaches' reflections on how playing goal aided their understanding of the game from strategic point of view, (d) a description of the four learning situations reported by the coaches to be most influential including how each situation helped the coach learn to coach, and (e) an overview of whether the athletic experiences (i.e. highest level played and position played) had an influence on the coaching opportunities afforded to each coach during his or her pathway. Please note that each coach has been given a pseudonym.

Coach Pathways

The section explores the coaches' demographics and career pathways. During the interviews each coach was asked to discuss their career pathways from the time they either played junior or high school hockey until the present time. While it was easy to find the majority of each coach's athletic and career information through archival research, the discussions with each coach allowed me to fill in the areas that were not available in the archives. A profile of each coach's individual athletic involvement, prior to becoming a coach, and career paths are provided in Tables 2 to 12. Data are presented for (a) the league they either played or coached in (b) their position (i.e. goaltender, assistant coach, head coach, scout) within the league. A comparative profile of each coach's athletic involvement and career duration is presented in Table 13.

Table 2

Matthew's Career Pathway

Year	League	Role
1984-85	Junior B	Goaltender
1985-86	OHL	Goaltender
1986-87	OHL	Goaltender
1987-88	Did Not Play	Did Not Play
1988-89	ECHL	Goaltender
1989-90	ECHL	Goaltender
1990-91	ECHL	Goaltender
1991-92	ECHL/AHL	Goaltender
1992-93	ECHL/IHL	Goaltender
1993-94	ECHL/IHL	Goaltender
1994-95	ECHL	Player Assistant Coach
1995-96	ECHL	Goaltender
1996-97	ECHL/AHL	Goaltender
1997-98	ECHL	Goaltender
1998-99	ECHL	Goaltender
1999-00	ECHL	Goaltender
2000-01	ECHL	Player Assistant Coach
2001-02	ECHL	Assistant Coach
2002-03	ECHL	Assistant Coach
2003-04	ECHL	Head Coach
2004-05	ECHL	Head Coach
2005-06	ECHL	Head Coach
2006-07	ECHL	Head Coach
2007-08	NHL	Scout
2008-09	NHL	Scout
2009-10	ECHL	Head Coach/Director of Hockey Operations
2010-11	ECHL	Head Coach/Director of Hockey Operations
2011-12	ECHL	Head Coach/Director of Hockey Operations
2012-13	ECHL	Head Coach/Director of Hockey Operations

Note. Adapted from “HockeyDB,” by HockeyDB, 2013; “Elite Prospects,” by Elite Prospects, 2013. Any information that was not found through archival analysis was provided by the coach during the interview.

Table 3

Peter's Career Pathway

Year	League	Role
1978-79	OHL	Goaltender
1979-80	OHL	Goaltender
1980-81	OHL	Goaltender
1981-82	OHL	Goaltender
1982-83	CIAU	Goaltender
1983-84	CIAU	Goaltender
1984-85	CIAU	Goaltender
1985-86	International ^a	Goaltender
1986-87	IHL	Goaltender
1987-88	Did Not Play	Did Not Play
1988-89	OHL	Assistant Coach
1989-90	OHL	Assistant Coach
1990-91	NCAA	Assistant Coach
1991-92	No record ^b	No record
1992-93	Jr C	Head Coach
1993-94	Jr C	Head Coach
1994-95	Jr C	Head Coach
1995-96	Jr C	Head Coach
1996-97	Jr C	Head Coach
1997-98	Jr B	Head Coach
1998-99	Jr B	Head Coach
1999-00	Jr B	Head Coach
2000-01	Jr B	Head Coach
2001-02	CCAA	Head Coach
2002-03	CCAA	Head Coach
2003-04	CCAA	Head Coach
2004-05	CCAA	Head Coach
2005-06	CCAA	Head Coach
2006-07	CCAA	Head Coach
2007-08	CCAA	Head Coach
2008-09	CIS	Head Coach
2009-10	CIS	Head Coach
2010-11	CIS	Head Coach
2011-12	CIS	Head Coach
2012-13	CIS	Head Coach

Note. CIAU = Canadian Interuniversity Athletic Union (Presently CIS). CCAA = Canadian College Athletic Association. Adapted from “HockeyDB,” by HockeyDB, 2013; “Elite Prospects,” by Elite Prospects, 2013. Any information that was not found through archival analysis was provided by the coach during the interview.

^aPart of Hockey's "Program of Excellence", whose purpose was to prepare teams for the Winter Olympics every four years. This National team played a full season together all over the world against both national and international teams. ^bNo record of where Peter coached during this season could be found using the internet hockey databases or during the interview.

Table 4

William's Career Pathway

Year	League	Role
1981-82	USHS	Goaltender
1982-83	NCAA	Goaltender
1983-84	NCAA	Goaltender
1984-85	NCAA	Goaltender
1985-86	NCAA	Goaltender
1986-87	AHL	Goaltender
1987-88	AHL	Goaltender
1988-89	ECHL/AHL	Goaltender
1989-90	AHL/NHL	Goaltender
1990-91	AHL/NHL/WC	Goaltender
1991-92	AHL/International ^a /OG	Goaltender
1992-93	ECHL	Goaltender
1993-94	ECHL/IHL	Goaltender
1994-95	IHL	Assistant Coach
1995-96	IHL	Assistant Coach
1996-97	IHL	Assistant Coach
1997-98	No record	No record
1998-99	ECHL	Head Coach
1999-00	ECHL	Head Coach
2000-01	AHL	Head Coach
2001-02	AHL	Assistant Coach
2002-03	AHL	Assistant Coach/Head Coach
2003-04	AHL	Head Coach
2004-05	AHL	Head Coach
2005-06	AHL	Head Coach
2006-07	AHL	Head Coach
2007-08	AHL	Head Coach
2008-09	NHL	Head Coach
2009-10	WC	Assistant Coach
	NHL	Head Coach
	OG	Assistant Coach
	WC	Assistant Coach
2010-11	NHL	Head Coach
	WC	Head Coach
2011-12	NHL	Assistant Coach
	WC	Head Coach
2012-13	NHL	Assistant Coach

Note. USHS = United States High School. OG = Olympic Games. WC = World Championship. Adapted from "HockeyDB," by HockeyDB, 2013; "Elite Prospects," by Elite Prospects, 2013;

“USCHO,” by USCHO, 2013. Any information that was not found through archival analysis was provided by the coach during the interview.

^aPart of Hockey USA’s “Program of Excellence”, whose purpose was to prepare teams for the Winter Olympics every four years. This National team played a full season together all over the world against both national and international teams.

Table 5

Ian's Career Pathway

Year	League	Role
1977-78	Jr A	Goaltender
1978-79	Jr B	Goaltender
1979-80	Jr B	Goaltender
1980-81	Jr B	Goaltender
1981-82	Jr B	Goaltender
1982-83	Did Not Play	Did Not Play
1983-84	Did Not Play	Did Not Play
1984-85	Did Not Play	Did Not Play
1985-86	Did Not Play	Did Not Play
1986-87	Did Not Play	Did Not Play
1987-88	Jr A	Goaltender Coach/ Head Coach
1988-89	Jr A	Head Coach
1989-90	Jr A	Head Coach
1990-91	Jr A	Head Coach
1991-92	QMJHL	Head Coach
1992-93	QMJHL	Head Coach
1993-94	AHL	Assistant Coach
1994-95	AHL	Head Coach
1995-96	AHL	Head Coach
1996-97	AHL	Head Coach
1997-98	AHL	Head Coach
1998-99	NHL	Head Coach
1999-00	NHL	Head Coach
2000-01	NHL	Head Coach
2001-02	NHL	Head Coach
2002-03	NHL	Head Coach
2003-04	NHL	Head Coach
2004-05	NHL Lockout ^a	NHL Lockout
2005-06	NHL	Head Coach
2006-07	NHL	Head Coach
2007-08	NHL	Head Coach
2008-09	Did Not Coach	Did Not Coach
2009-10	Did Not Coach	Did Not Coach
2010-11	Did Not Coach	Did Not Coach
2011-12	NLA	Head Coach
2012-13	NHL	Head Coach

Note. NLA = National League A Switzerland. Adapted from “HockeyDB,” by HockeyDB, 2013; “Elite Prospects,” by Elite Prospects, 2013. Any information that was not found through archival analysis was provided by the coach during the interview.

^aThe NHL did not play a season in 2004-2005 due to a labour dispute.

Table 6

Darcy's Career Pathway

Year	League	Role
1999-00	Jr A	Goaltender
2000-01	Jr A	Goaltender
2001-02	Jr A	Goaltender
2002-03	NCAA III	Goaltender
2003-04	NCAA III	Goaltender
2004-05	NCAA III	Goaltender
2005-06	NCAA III	Goaltender
2006-07	NCAA	Assistant Coach
2007-08	NCAA	Assistant Coach
2008-09	NCAA III W	Head Coach
2009-10	NCAA III W	Head Coach
2010-11	NCAA III W	Head Coach
2011-12	NCAA III W	Head Coach
2012-13	NCAA W	Head Coach

Note. NCAA W = National Collegiate Athletic Association Womens. Adapted from “The HockeyDB,” by HockeyDB, 2013; “Elite Prospects,” by Elite Prospects, 2013; “USCHO,” by USCHO, 2013. Any information that was not found through archival analysis was provided by the coach during the interview.

Table 7

Natalie's Career Pathway

Year	League	Role
1998-99	USHS	Goaltender
1999-00	NCAA W	Goaltender
2000-01	NCAA W	Goaltender
2001-02	NCAA W	Goaltender
2002-03	NCAA W	Goaltender
	WC	Goaltender
2003-04	USHS	Assistant Coach
2004-05	NCAA W	Assistant Coach
2005-06	NCAA W	Assistant Coach
2006-07	NCAA W	Assistant Coach
2007-08	NCAA III W	Head Coach
2008-09	NCAA III W	Head Coach
2009-10	NCAA III W	Head Coach
2010-11	NCAA III W	Head Coach
2011-12	NCAA III W	Head Coach
2012-13	NCAA III W	Head Coach

Note. USHS = United States High School. WC = World Championship. NCAA W = National Collegiate Athletic Association Womens. Adapted from “USCHO,” by USCHO, 2013. Any information that was not found through archival analysis was provided by the coach during the interview.

Table 8

Terry's Career Pathway

Year	League	Role
1980-81	Jr A	Goaltender
1981-82	Jr A	Goaltender
	WHL	Goaltender
1982-83	WHL	Goaltender
1983-84	WHL	Goaltender
1984-85	WHL	Goaltender
1985-86	Did Not Play	Did Not Play
1986-87	CIAU	Goaltender
1987-88	CIAU	Goaltender
1988-89	CIAU	Goaltender
1989-90	CIAU	Goaltender
1990-91	CIAU	Goaltender
1991-92	CIAU	Assistant Coach
1992-93	WHL	Assistant Coach
1993-94	WHL	Assistant Coach
1994-95	Jr B	Head Coach
	WHL	Goaltender Coach
1995-96	Jr B	Head Coach
1996-97	WHL	Assistant Coach
1997-98	WHL	Assistant Coach
1998-99	Japan Professional	Head Coach
1999-00	Japan Professional	Head Coach
2000-01	Japan Professional	Head Coach
2001-02	Japan Professional	Head Coach
2002-03	Did Not Coach	Did Not Coach
2003-04	WHL	Head Coach
2004-05	Did Not Coach	Did Not Coach
2005-06	Did Not Coach	Did Not Coach
2006-07	Did Not Coach	Did Not Coach
2007-08	Did Not Coach	Did Not Coach
2008-09	Did Not Coach	Did Not Coach
2009-10	Pee Wee AA	Assistant Coach
2010-11	Pee Wee AA	Assistant Coach
2011-12	Bantam AA	Assistant Coach
2012-13	Bantam AA	Assistant Coach

Note. CIAU = Canadian Interuniversity Athletic Union (presently CIS). Adapted from “HockeyDB,” by HockeyDB, 2013; “Elite Prospects,” by Elite Prospects, 2013. Any information that was not found through archival analysis was provided by the coach during the interview.

Table 9

David's Career Pathway

Year	League	Role
1986-87	USHS	Goaltender
1987-88	NCAA	Goaltender
1988-89	NCAA	Goaltender
1989-90	NCAA	Goaltender
1990-91	NCAA	Goaltender
1991-92	ECHL	Goaltender
1992-93	USHS	Head Coach
1993-94	NCAA III	Assistant Coach
1994-95	NCAA III	Assistant Coach
1995-96	NCAA	Assistant Coach
1996-97	NCAA	Assistant Coach
1997-98	NCAA	Assistant Coach
1998-99	NCAA	Assistant Coach
1999-00	NCAA	Assistant Coach
2000-01	NCAA	Assistant Coach
2001-02	NCAA	Assistant Coach
2002-03	NCAA	Assistant Coach
2003-04	NCAA	Assistant Coach
	NCAA W	Head Coach
2004-05	NCAA W	Head Coach
2005-06	NCAA W	Head Coach
2006-07	NCAA W	Head Coach
2007-08	NCAA W	Head Coach
2008-09	NCAA W	Head Coach
2009-10	NCAA W	Head Coach
2010-11	NCAA W	Head Coach
2011-12	NCAA W	Head Coach
2012-13	NCAA W	Head Coach

Note. USHS = United States High School. NCAA W = National Collegiate Athletic Association Womens. Adapted from “HockeyDB,” by HockeyDB, 2013; “Elite Prospects,” by Elite Prospects, 2013. Any information that was not found through archival analysis was provided by the coach during the interview.

Table 10

Shawn's Career Pathway

Year	League	Role
1972-73	USHS	Goaltender
1973-74	Jr. A	Goaltender
1974-75	NCAA	Goaltender
1975-76	NCAA	Goaltender
1976-77	NCAA	Goaltender
1977-78	NCAA	Goaltender
1978-79	NCAA II ^a	Assistant Coach
1979-80	NCAA II	Assistant Coach
1980-81	NCAA	Assistant Coach
1981-82	NCAA	Assistant Coach
1982-83	NCAA	Assistant Coach
1983-84	NCAA	Assistant Coach
1984-85	NCAA	Assistant Coach
1985-86	NCAA	Assistant Coach
1986-87	NCAA	Assistant Coach
1987-88	NCAA	Assistant Coach
1988-89	NCAA	Assistant Coach
1989-90	NCAA	Assistant Coach
1990-91	NCAA	Assistant Coach
1991-92	NCAA	Assistant Coach
1992-93	NCAA	Assistant Coach
1993-94	NCAA	Assistant Coach
1994-95	NCAA	Assistant Coach
1995-96	NCAA	Assistant Coach
1996-97	NCAA	Assistant Coach
1997-98	NCAA	Assistant Coach
1998-99	NCAA	Assistant Coach
1999-00	NCAA	Assistant Coach
2000-01	NCAA	Assistant Coach
2001-02	NCAA	Assistant Coach
2002-03	NCAA	Assistant Coach
2003-04	NCAA	Assistant Coach
2004-05	NCAA W	Head Coach
2005-06	NCAA W	Head Coach
2006-07	NCAA W	Head Coach
2007-08	NCAA W	Head Coach
2008-09	NCAA W	Head Coach
2009-10	NCAA W	Head Coach
2010-11	NCAA W	Head Coach
2011-12	NCAA W	Head Coach
2012-13	NCAA W	Head Coach

Note. USHS = United States High School. NCAA W = National Collegiate Athletic Association Womens. Adapted from “HockeyDB,” by HockeyDB, 2013; “Elite Prospects,” by Elite Prospects, 2013; “USCHO,” by USCHO, 2013. Any information that was not found through archival analysis was provided by the coach during the interview.

^aThe NCAA previously had three divisions of hockey (I, II, III). Due to the acceptance of many Division II schools into Division I Division II hockey disbanded with the remaining schools moving to Division III.

Table 11

George's Career Pathway

Year	League	Role
1983-84	Did Not Play	Did Not Play
1984-85	NCAA	Goaltender
1985-86	NCAA	Goaltender
1986-87	NCAA	Goaltender
1987-88	ECHL	Goaltender
1988-89	USHS	Assistant Coach
1989-90	NCAA	Assistant Coach
1990-91	NCAA	Assistant Coach
1991-92	NCAA	Assistant Coach
1992-93	NCAA	Assistant Coach
1993-94	NCAA	Assistant Coach
1994-95	NCAA	Assistant Coach
1995-96	NCAA	Assistant Coach
1996-97	NCAA	Assistant Coach
1997-98	NCAA	Assistant Coach
1998-99	No Record	No Record
1999-00	NCAA W	Head Coach
2000-01	NCAA W	Head Coach
2001-02	NCAA W	Head Coach
2002-03	NCAA W	Head Coach
2003-04	NCAA W	Head Coach
2004-05	NCAA W	Head Coach
2005-06	NCAA W	Head Coach
2006-07	NCAA W	Head Coach
2007-08	NCAA W	Head Coach
2008-09	NCAA W	Head Coach
2009-10	NCAA W	Head Coach
2010-11	NCAA W	Head Coach
2011-12	NCAA W	Head Coach
2012-13	NCAA W	Head Coach

Note. NCAA W = National Collegiate Athletic Association Womens .Adapted from “HockeyDB,” by HockeyDB, 2013; “Elite Prospects,” by Elite Prospects, 2013; “United States College Hockey Online,” by United States College Hockey Online, 2013. Any information that was not found through archival analysis was provided by the coach during the interview.

^aNo record of where George coached during this season could be found using the internet hockey databases or during the interview.

Table 12

Brent's Career Pathway

Year	League	Role
1970-71	Jr A	Goaltender
1971-72	NCAA	Goaltender
1972-73	NCAA	Goaltender
1973-74	NCAA	Goaltender
1974-75	NCAA	Goaltender
1975-76	CIS	Goaltender
1976-77	CCAA	Head Coach
1977-78	CCAA	Head Coach
1978-79	CCAA	Head Coach
1979-80	Ontario Jr B	Head Coach
1980-81	Ontario Jr A	Head Coach
1981-82	Ontario Jr A	Head Coach
1982-83	Ontario Jr A	Head Coach
1983-84	OHL	Assistant Coach
1984-85	OHL	Assistant Coach
1985-86	OHL	Head Coach
1986-87	NHL	Head Coach
1987-88	NHL	Head Coach
1988-89	NHL	Assistant Coach
1989-90	NHL	Assistant Coach
1990-91	NHL	Assistant Coach
1991-92	NHL	Assistant Coach
1992-93	NHL	Assistant Coach
1993-94	AHL	Head Coach
1994-95	NHL	Assistant Coach
1995-96	NHL	Assistant Coach/Head Coach
1996-97	NHL	Head Coach
1997-98	NHL	Head Coach
1998-99	NHL	Head Coach
1999-00	NHL	Head Coach
2000-01	NHL	Head Coach
2001-02	NHL	Head Coach
	OG	Assistant Coach
2002-03	NHL	Head Coach
2003-04	NHL	Head Coach
	WCup	Assistant Coach
2004-05	NHL Lockout ^a	NHL Lockout
2005-06	NHL	Head Coach
	OG	Assistant Coach
2006-07	NHL	GM/Head Coach
2007-08	NHL	GM/Head Coach

2008-09	NHL	General Manager
2009-10	NHL	Head Coach
2010-11	NHL	Head Coach
2011-12	NHL	Head Coach
2012-13	Did Not Coach	Did Not Coach

Note. CCAA = Canadian College Athletic Association; OG = Olympic Games. Adapted from “HockeyDB,” by HockeyDB, 2013; “Elite Prospects,” by Elite Prospects, 2013; “USCHO,” by USCHO, 2013. Any information that was not found through archival analysis was provided by the coach during the interview.

^aThe NHL did not play a season in 2004-2005 due to a labour dispute.

Table 13

Comparative Summary of Each Coach's Athletic and Career Pathway

Coach	# Yrs Playe d HP	Highest Level Played	# Yrs as Coach	#Yrs Coaching at HP	# Years as Asst	# Yrs Asst at HP	Highest Level as Asst	# Yrs as Head	# Yrs Head at HP	Highest Level as Head
Matthew 2	15	AHL/IHL	12	12	4	4	ECHL	8	8	ECHL
Peter 3	9	IHL	24	15	3	3	OHL	21	12	CIS
William 4	12	NHL	18	18	8	8	NHL	13	13	NHL
Ian 5	1	Junior A	22	22	1	1	AHL	21	21	NHL
Darcy 6	7	NCAA III M	7	7	2	2	NCAA M	5	5	NCAA W
Natalie 7	4	NCAA W	10	9	4	3	NCAA W	6	6	NCAA III W
Terry 8	10	CIS	16	10	9	5	WHL	7	5	WHL
David 9	5	NCAA M	21	20	11	11	NCAA M	10	9	NCAA W
Shawn 10	5	NCAA M	33	33	26	26	NCAA M	7	7	NCAA W
George 11	4	ECHL	24	23	10	9	NCAA M	14	14	NCAA W
Brent 12	6	NCAA M	35	34	11	11	NHL	24	23	NHL

Note. HP = High-Performance. Yrs = Years. Head = Head Coach. Asst = Assistant Coach. NCAA M = National Collegiate Athletic Association Men's. NCAA W = National Collegiate Athletic Association Women's. The numbers added to each coach's name refer to the respective table number that their individual career pathway can be seen. Adapted from the tables 1-11.

The pathway of each coach differs in the number of years played and coached (assistant and head) but the one predominant theme is that each coach has worked their way through various ranks of hockey to become a head coach.

While they coached for varying lengths of time, coaches Darcy, David, Shawn, and George share similar career paths. After acting as assistant coaches on the men's side of NCAA Division 1 these coaches made the transition the women's NCAA Division 1 side to become head coaches of women's teams. Darcy did not immediately transition from men's Division 1 to women's Division 1. Instead, he became a head coach of women's Division 3 prior to ascending to the women's Division 1 level.

One of the coaches (David) who immediately transitioned from being an assistant coach on the men's side to head coach on the women's side did not intend to take the career pathway he currently follows. Once his playing career ended he sought a career in business but did not enjoy the job. Feeling that something was missing from his life he returned to hockey as a coach of a preparatory school team followed by two years as an assistant coach at a NCAA Division 3 institution. After his brief stint in Division 3 he moved onto Division 1 where he would serve as a men's assistant coach for eight years. He would have remained on the men's side of the sport had it not been for the passing of a close colleague and friend:

“When I first came to that university as a men's assistant the head coach had hired an additional assistant coach. He turned out to be a great friend of mine from high school who had once before been an assistant at this university. So he kind of helped with getting my job but after five years he moved over to the women's side and took over that program. Unfortunately, three years later he passed away and if you had asked me the day before he passed if I had any desire to coach the women's program I probably would

have told you that I wanted to stay on the men's side. After things settled down my head coach and athletic director approached me about taking over the women's side. At first I was hesitant, but they ensured me that if I did not enjoy coaching the women's team I could return to the men's team. After about two weeks I really fell in love with the women's game, I loved the fact that they had the same passion for the game as the men did." (David)

Not only did David find women had the same passion for the game as the men did, this was his chance to be a head coach at the collegiate level:

"I think as an assistant coach you always want to become a head coach and you never know when those opportunities might arise. Timing is never always the best but I think mine was a unique experience how it came about." (David)

The greatest variation in career pathways can be seen in the coaches coach at the professional level. For instance one coach (Ian) volunteered as a goaltender coach for a local junior team while working a full time job in his hometown. At no point did he have aspirations of becoming a head coach of a hockey team because he wanted stability for his young family. However, that changed when his team lost their first five games of their season and the head coach was terminated. From there he was asked by the team's owner, who had been his baseball coach when he was a 10, 12, and 14, to take over the head coach position on three separate occasions. The coach remembers:

"I played baseball for him as kid so he wanted me there as head coach and obviously I had already said no three times so he asked me to give him two weeks while he searched for a new head coach. I agreed and after two weeks I asked him where the new coach was because I was working full time and I had two young kids at home so my plate was pretty

full. The owner would tell me things like the new coach wanted too much money and he decided to pursue another guy. Long story short we got all the way to the end of season and by that time the drug of coaching was in my veins. That is where it all started. I quit my full time job and went off to become a coach.” (Ian)

He quit his full time job and subsequently discovered that the owner of the team was rather devious and never had any intentions of getting a new coach:

“When we got beat in the playoffs he called me in a meeting and the first thing that I told him was that I was interested in staying as the head coach if he had not found a new head coach and if he thought I did a good job. With that he started to laugh and he said that he never pursued or talked to anybody else. He said that he lied to me because he knew I could get the job done. He said that I was his coach.” (Ian)

Another coach (Matthew) found his passion for the game through his father’s wisdom. After finishing his junior hockey career in the OHL he tried out and was cut from an ECHL team. For that reason he returned home and became an apprentice under his father to become a mechanic. During Christmas that year he received a call from another ECHL team who were in need of a goaltender. At that time he had already started his life away from hockey and was in line for great job at a vehicle factory where he would make 22 dollars per hour. After much consideration he left to play hockey again because his father told him “You have 45 years to retire in a car factory so you should go chase your dreams because you are young” (Matthew). As a result he played 13 seasons of professional hockey, 2 of which as a player coach which sparked his interest in coaching full time once he completed his career as a goaltender. Often a leader (i.e. captain) or older member of the team will inherit the role of player coach at minor professional level as a way to decrease a team’s payroll. Player coaches are usually forwards or

defensemen; the idea of a goaltender acting as a player coach is rather unique. A forward or defenseman is usually the designated player coach because he spends more time on the bench than a goaltender does and plays the whole ice as most of the members of the team.

Consequently this allows for more interaction between the player coach and his teammates.

Often coaches will move between the NHL and AHL (William, Ian, Brent) to coach in different capacities because of the instability of the results driven nature of professional hockey. For example Brent had a very successful career as a head coach in major junior. As a result he quickly jumped to the NHL as a head coach where he had limited success. Consequently he was fired after two seasons, which resulted in a step back into an assistant coaching role with another team in order to gain more experience at the NHL level. After five seasons as an assistant coach in the NHL:

“I felt after 1993 I wanted to get back and take my own program because I was starting to get labelled as an assistant so I asked the team I was coaching with if I could drop down and be the general manager and coach of the farm team in the AHL”. (Brent)

He then subsequently moved back to the NHL as an assistant coach for one and half seasons before he was hired as a head coach, a role in which he remained until the end of his career.

Coaches Knowledge

“I didn’t have the knowledge of the xs and os”

Before reporting which learning situations contributed to the 11 coaches coaching careers it is important to understand what it was exactly the coaches felt they needed to learn when making the transition from playing goal to becoming a coach of other positions. Seven of the eleven coaches (Matthew, Peter, William, Ian, Darcy, Terry, George) felt that their biggest

handicap was having a basic understanding of the game from a strategic standpoint. One coach (Darcy) said:

“I think the hardest part for me was trying to understand the rest of the game. I will be honest as a goalie I never really spent a whole lot of time talking, thinking, or learning about different forechecks, defensive zones, neutral zones or different systems. So for me to be able to identify and articulate what other teams were doing and coaching forwards and defensemen were areas that I had to put in the most time and learn the game because as a goaltender I didn’t often care about what system was being played because it didn’t affect me as a player.” (Darcy)

Another coach (Peter) felt that as a goaltender you need to work harder to develop your skill of understanding the game: “As a player you didn’t pay a lot of attention to the technical side of the game and I think traditionally goaltenders that become coaches work hard to develop their technical skill” (Peter). As Matthew outlines the most important thing for a goaltender to focus on is refining his own game rather than focusing on what his responsibilities in the offensive zone might be because unlike forwards and defensemen a goaltender only plays in one zone of the ice.

One of the professional coaches (Terry) felt his biggest roadblock when beginning his coaching career involved articulating practice drills to his players. As a goaltender he had only ever focused on the outcome of the practice drills – the shot on goal. Therefore he did not know how to write up drills, how they started and what happened in between to arrive at the shot on goal.

“The entire length of the ice”

The other four coaches (Natalie, David, Shawn, Brent) felt that prior to making the transition into coaching they had a basic understanding of tactical side of the game because as a goaltender they had the ability to see plays develop. One coach said

“From the entire length of the ice out you are paying attention to really the entire game.

Goaltenders know a lot, see a lot, and are watching the game unless the action is in their end of the rink they are just focused on the puck.” (Natalie)

Coach 8 made the comparison of a goaltender to a catcher in baseball because both positions are played with a view of the entire playing surface, allowing observations of how the other team’s systems (strategies) unfold. Goaltenders and catchers get to see the game develop in front of them. Also these players at time enjoy the benefits of sitting on the bench and listening to coaches communicate about tactics and in game decisions.

“Goaltenders are pretty similar to catchers in baseball because you get to see the whole game. And I think sometimes if you are not playing in a game and you are sitting on the bench and depending on where are sitting you might sit between the head and assistant coach. You might get to hear a lot of dialogue during the games because you are always getting prepared to play in case something happens (e.g., injury to starting goaltender).

So you get to hear some of the conversations and maybe some of the tactical stuff that on goes on during games.” (David)

In contrast, while two other coaches (Shawn and Brent) have the same opinion that a goaltender can see the entire length of the ice and the benefits that come with it their opinions on the matter differ. Coach 11 felt that a goaltender’s attention to opposing team’s tactics has seen an evolution brought about by the introduction of full time goalie coaches. During his playing

career he said that it was important to understand the game and understand how to play within the team's system but the culture has changed. "Now the goalies are so well surrounded by goalie coaches that they have their own preparation. I don't know if they pay as much attention to the rest of the preparation as they did in my days" (Brent). Today, a goaltender's preparation consists of "Spending more time with their own coach looking at the opposition tendencies of certain shooters" (Brent). Another coach felt that a goaltender is always looking at the game and evaluating each situation from the backend which results in a pretty good understanding of the game. However, he conceded, "It doesn't mean I know anything about faceoffs, powerplays" (Shawn).

Learning Situations Reported

During the interviews each coach talked about how they learned to become a coach or be a better coach. Based on the learning situations reported in Wright et al. (2007) I asked the coaches about each situation in which they could learn and how these situations influenced their coach knowledge. Additionally, they were also asked about other situations in which they may have learned from that were not included in Wright et al. (2007). For a list of all of learning situations reported see Table 14. Collectively the majority of the eleven coaches felt that a) coach interactions, b) books and videotapes, c) coach clinics and academic education d) experiences related to playing were their most influential sources of coach learning. As such only these are reported and discussed in detail. Additionally, it is important to note that despite being shown separately in the table 14 coach clinics and academic education have been combined into one section below because the coach's instruction is led by another person. Also, in spite of television being reported as a learning situation by all the coaches it will not be discussed below. All the coaches engaged in brief dialogue about the subject when asked about it and many did

not view it as a meaningful or purposeful way to learn in comparison to other learning situations. Furthermore, as seen in table 14 coach clinics, seminars, and conferences was reported as a learning situation the same number of times as the internet. However, the internet will not be discussed below because like television the seven coaches who learned from it felt it was only useful for finding new practice drills and not as important as the four main learning situations that will be discussed. For the purpose of this study, it is important to note that the experiences the coaches had within each learning situation were not completely uniform.

Table 14

Learning Situations Reported by High-Performance Head Hockey Coaches who Formerly Played Goal

Learning Situation	Description	Coaches Reported
1. Coach Interactions	On the same team	11
	In the same league	
	Outside their own league	
	Elite, expert, high-performance coaches	
2. Books and videotapes	Information about leadership, sport psychology, drills, and tactics	11
	Game film	
3. Personal experiences related to	Playing hockey	11
	Coaching hockey	
	Family	
4. Clinics/Seminars/Conferences	Networking	7
	Guest Speakers	
5. National Coaching Certification Program	Coach Stream	3
	Developmental 1	
	High Performance 1	
	High Performance 2	
	Advanced 1	
	Advanced 2	
6. Formal Mentoring	Coach mentor	1
7. The Internet	Drills	7
8. Scouting	Watching team structure and tendencies, coaching decisions and tendencies, player instincts and tendencies	6
9. Academic Education	Leadership	5
	Teaching techniques	
	Differences in learning	
10. Player Interactions	On current team	2
	On former team	
11. Television	Watching hockey	11

Note. Adapted from “Learning how to Coach: The Different Learning Situations Reported by Youth Ice Hockey Coaches,” by T. Wright, P. Trudel, and D. Culver, 2007, *Physical Education and Sport Pedagogy*, 22, p. 131. Copyright 2007 by Routledge Taylor & Francis Group.

Coach interactions

All of the coaches interviewed felt that at some point throughout their careers discussing the game with other coaches proved to be beneficial. For example, one coach said “I think more of my development has been through communicating with other coaches that I know or sharing experiences and things like that” (Natalie). When the coaches elaborated on the possible benefits of interacting with other coaches, in terms of learning how to coach, several of the coaches spoke adamantly about the head and assistant coaches they worked with when entering the profession as assistant coaches. The coaches themselves often discussed the head coaches they formerly worked under as learning resources. One coach said: “I think for me the first head coach I ever worked for is a big one who comes to mind. This is someone who I stay close with to this day. He is someone I can bounce ideas off of as time goes on” (Darcy). Many of the coaches added that they always felt like they could call a coach that they had formerly worked with in order to have a question answered. One coach said: “Wherever I was in the hockey world and had a question I could just pick up the phone and call him and he would always call me back” (George).

One of the benefits of coaching in professional hockey is that head coaches sometimes get the opportunity to lead their country at the World Championship or Olympic Winter Games. Consistently, countries such as Canada or the United States always hire three NHL head coaches with one acting as the head coach and two acting as assistants. This opportunity to coach alongside two other of the best coaches in the country, deemed so by the governing hockey body, is one that can provide a remarkable learning experience. For instance, one coach spoke of his experience when he had the chance to coach at the Olympics with some of the game’s best coaches and learn about how different team’s operate: “Having the opportunity to spend a week

during the summer before the Olympics to prepare our training camp, team's systems, and have the opportunity to talk with some of the top coaches was a great learning experience for me" (Brent).

Five of the eleven coaches (Matthew, Ian, Terry, George, Brent) spoke about how helpful it was in their early days as players to work at hockey camps that featured coaches known to have great hockey minds. One coach said:

"When I was in university the way I earned money was to coach at hockey camps. I worked at goalie schools but I also worked at regular hockey camps. I basically coached everywhere I could to earn money, but what I didn't know was that I was gaining valuable experience because I was working with and listening to some of the best hockey minds in New England. So I was gaining knowledge about coaching whether it was skill development, defense, systems, or goaltending." (George)

The head coaches at the NCAA level (Darcy, Natalie, David, Shawn, George) all felt that valuable insight can be gained by spending time with junior and high school hockey coaches when recruiting student-athletes for collegiate hockey. For instance, one coach talked about the value of seeing junior and high school team's practice then discussing the practice drills with the head coach:

"I think some of the best drills I have picked up on the men's side have been through watching junior or high school teams practice. After practice you get talking to the coach about a particular student athlete and then you pick his brain about the drill you saw. You can ask him what he was trying to accomplish with the drill and how did he articulate it to his players." (David)

Books and videotapes

All the coaches in the study spoke of seeking out books and some form of videos (i.e. game film, instructional videos) to increase their coaching knowledge. While most coaches spoke of the utilization of video as an obligatory part of coaching a team, time reading books was a self-initiated activity. Some of the coaches who spoke about watching game film discussed it in a manner of short term and long term learning such as gaining insight on other team's tactics to be prepared for an upcoming game. For instance one coach said "I wouldn't say many instructional videos that I watch on that part, the videos would be more on tactical stuff and systematic stuff" (David). Coach 5 felt that video was a very important learning tool especially when he began his coaching career:

"I watched a lot of video as a new coach. I was also into pre scouting opponents in order to know what the hell I was talking about when discussing tactics with players. I spent a lot of time watching film on the computer over and over for a lot of hours to learn the Xs and Os. You start to notice trends of just how certain coaches play and you get used to the different styles of each team. I think it was really beneficial for me long term."

(Darcy)

Other coaches (Matthew, William) stated that they watched video pertaining to their own team to improve their players' play from the previous game and prepare the team for the next game by finding out what their opponents did and what brought them success. Understanding how other teams played allowed them to coach their team accordingly.

Many of the coaches who mentioned game film said that it has become such a large part of coaching because of the advancements in technology. Additionally, the technology has

become so efficient that it acts as a facilitator for other coach activities because it decreases the amount of time a coach needs to spend watching and preparing game film. One coach said:

“I remember when I was coaching junior hockey with the good old VCRs. It would take us three to four hours to watch one game to prepare a team tape to review the next morning. Today you click one button and you can go from the first shift of the game to the last shift. It is unbelievable to pre scout other teams, to analyze your own players, other team’s players, and to prepare your own team with things such as special teams, five on five play, and faceoff plays. It gives you so many more options and saves you so much time and gives you more time in your day to do other things as a coach.” (Ian)

In contrast only one coach said that he continues to use instructional videos to help with his coach learning: “Everybody is looking for an edge over the next guy so I have every possible videotape and DVD to be a better coach. You try to use as many teaching tools as possible” (Peter). Another coach rarely uses video or game film because it is not his strong suit; instead he counteracts this by hiring assistant coaches who are well versed in this area and can use the video software for him:

“I am probably not the best person in the world in using video and I probably would go back and try to be a lot better at that than some other people. I always hire assistants who are good in that area because I know it is not one of my strengths.” (Shawn)

This coach argued that while watching video to prepare for other teams is beneficial and convenient it takes away from practical learning such as communicating with other coaches, seminars on coaching, and being at the arena to experience the atmosphere of the game.

All of the coaches interviewed chose books as a way of gaining valuable insight on coaching, leadership, business, strategy, practice drills, or sport psychology. From hockey

coaches, to football coaches, basketball coaches, military leaders, world leaders, university professors, and sport psychologists all the coaches felt that anything that could be applied to hockey or leading a group of people was beneficial to their learning. One coach said that he often reads many different types of books during his free time to gain more coach knowledge: “I think as much as people think we are trying to get away from it sometimes [take a break] that is our beach reading or sometimes that is our quiet reading” (Shawn). Another coach (Natalie) said that she is always reading books about leadership and anything involving hockey. This coach stated that she reads books because: “I am very motivated to learn new ways of coaching and new ways of motivating” (Natalie). Reading appears to be such a large part of the investigated coaches’ lifestyles that one coach (Ian) said his wife often gives him leadership, strategy, and practice drill books as presents for Christmas.

Conversely, while most of the coaches felt that reading was a very beneficial activity for their coach learning one coach argued that reading books is only one of many means to learn. He said:

“At times I will read books about different coaches and watch videos on some things. I guess it has probably impacted me but not to an extent that it has impacted the way I coach. I guess like anything it kind of makes a difference but all of your experiences make up who you are as coach.” (Darcy)

Coaching clinics and academic education

In this learning situation nine of the eleven coaches hold at least a bachelor’s degree and two did not pursue secondary education. Of the nine who hold bachelors’ degrees three have masters’ degrees. The bachelor’s degrees held are two in physical education, three in education; four other coaches held degrees in other disciplines such as economics, English, interpersonal

and public communications, and marketing. Amongst those to receive bachelor's degrees the two coaches with physical education degrees hold master's degrees in sports administration and education respectively, while one of the coaches who holds an undergraduate degree in education also holds a master's degree in education. Some of the coaches commented on the value of both their university education and coaching clinics they had taken before and during their coaching careers. One of the coaches said that his degree in education was helpful for understanding the leadership part of coaching: "I think classes or student teaching while studying for a degree in education you can learn how to lead and teach" (Shawn). Another coach elaborated on the knowledge gained through his student teaching experience while working towards a degree in education and how the lessons learned proved to be more important than anything learned at a coaching clinic:

"Doing my student teaching and being in the class and learning how to teach and learning how people learn to me that was just as valuable as maybe learning and sitting at a coaching clinic and talking hockey. For me it was more important to know and understand how people learn and how to interact with students and I think that to me was as important if not more important than simply being a hockey player and knowing the game." (Darcy)

All the coaches spoke about coaching clinics, with varying opinions about the clinics and the impact they had on their coach learning. One coach (Terry) said that throughout his coaching career he tried to attend as many clinics and conferences as possible in order to try and learn about the latest ideas and issues in coaching hockey. Another coach felt that clinics were very beneficial to coaches at lower levels (i.e minor hockey) to help understand the game: "When you go to the clinics and you are hearing what the pros are doing you will leave with more clarity of

what teams are trying to do when they play the game” (William). Some of the other coaches who discussed the benefits of attending coaching clinics made it clear that they used clinics as gateways to interact, network, and build relationships with other coaches. One coach said: “As you network through some of those coaching clinics you kind of pick people’s brains in how they handle certain situations” (David). Another coach affirmed this: “The good thing about going to Hockey Canada seminars is that you make connections, you meet some guys that are in love with the game just like you and you suddenly become friends” (Ian).

When discussing coaching clinics, seminars, and conferences, six of the eleven coaches discussed Roger Neilson’s coaching clinic held in Windsor, Ontario as an important fixture in their learning. Like other coaching clinics Neilson’s allows coaches to network with other coaches but it also provides a great lineup of guest speakers and clinic books and DVDs that can be brought home. One coach said:

“My first experience of doing that [Roger Neilson’s clinic] was as an assistant coach and I had the chance to pick people’s brains and I was very impressed with the lineup of coaches that presented, from the college to pro game, and just what they talked about. They talked about a bunch of different things like tactics that coaches used and I think Roger was and is the only one to run a coaching clinic like that.” (David)

Another coach talked about what can be taken away from Roger Neilson’s clinic: “I have 15 Roger Neilson clinic books that I have taken different things out of over the years and compiled into one book for reference” (Peter).

In spite of many of the coaches having attended coach clinics, conferences, and seminars before and during their careers there were four coaches who felt that attending clinics has not contributed to their learning in the same fashion it has for others. One coach said: “I have gone to

coaching clinics over the years but I don't know if they had a big impact on what I was able to do during my first couple of years coaching" (Darcy). Another coach (Natalie) said that the majority of her learning did not come through coaching clinics. Many of the coaches (Peter, David, Shawn, George) who are currently employed at colleges and universities said that coaching certifications are not required to be a head coach at that level. In fact one of these coaches has never been to a coaching clinic in his life:

"I guess I never had to because I am surrounded by some of the best people in the world. Every day is a classroom for me even since I have been a little kid I have had questions and I have had people who have taken personal interest in my development as a coach so I think I have been very fortunate." (George)

Experiences related to playing

In looking at this learning situation, it was found that all of the coaches spoke of an ongoing process of learning from the experiences they had with players and coaches while playing and coaching. The process included analyzing their perceived strengths and weaknesses of coaches they played for and worked with, analyzing situations they faced as players and members of teams, and what they might take from those experiences to develop themselves as head coaches. The emphasis placed on this learning situation by all the coaches is a clear indication that drawing on experience is a key component to coaching. One coach stated:

"I think every time that I come to a communication point with a kid I always reflect on something that went on back in my day. I went from being a starting goaltender to a back up and back to a starter in my four years of college hockey. I applied for 16 head coaching positions at the NCAA Division 1 level and did not get a single interview. I

have had to overcome many failures and those are things I reflect on when communicating with kids who are down on themselves.” (Shawn)

Eight coaches discussed things they took from their head coaches when they played. Some discussed the idea of learning what not to be from minor hockey and high school coaches while others discussed unique experiences they encountered while playing high-performance hockey. One coach conversed about an experience he had with a coach who was weak at developing tactical game plans for his team. As a result, his team lost the first two games of their playoff series which led to the recruitment of a university level coach with a strong background in hockey strategies for additional help. The coach remembers:

“So our team made the adjustments to what this new guy prescribed and bingo we were just off and running. We won the next three games and we tweaked a couple more things before we had to go back to their building. That kind of sparked my mind that you can influence games by changing your tactics. So early on in my career I was very much and Xs and Os guy but I learned later in my career that while Xs and Os are very important there is more to the game.” (Terry)

Another coach (Natalie) played for three different head coaches in her four years of collegiate hockey. She recalled that each coach was very different so she took notice of how the team responded to each coach’s teachings, ability to communicate, and demeanour. Now as a coach she has been able to draw from her experiences with each head coach to determine what coaching methods should work best with her team. Additionally, her experience with three different head coaches has created a need to reflect upon her own experiences from each season as a head coach to determine what worked and what did not.

In the game of hockey the goaltender usually takes the majority of the responsibility for a goal being allowed. Despite the fact that the opposing team must beat three forwards and two defensemen prior to beating the goaltender, the goaltender typically gets looked upon as the one who made the mistake. This has proved to be a great lesson for one professional coach who believes that because there is so much pressure on goaltenders it creates a strong ability to attend to details. He said:

“The goaltender has the most responsibility of any player on the team. Next it is the defensemen then the forwards. The forwards can miss a check or turn the puck over but they still have two defensemen to repair their mistakes. The defensemen can give away the puck and the goaltender can repair their mistakes. As a goalie, if you make a mistake 99.9 percent of the time there is no one behind you to save you. I think that this forces every goalie to take a lot of pride in focusing on the details, get it done the right way, and understand the game. The position of goaltender makes you a student of the game because you become so detail oriented.” (Ian)

Career Opportunities Afforded to Coaches Based on Athletic Experiences

Throughout the interviews, the coaches were asked to comment on whether they felt the highest level they played had an influence on their career paths as coaches. Moreover, they were asked to comment on whether they felt the position they played (i.e. goaltender) had an influence on their career paths as coaches.

In looking at experiences as an athlete, it was found that all of the coaches had competed in hockey at the high-performance level (i.e. junior hockey or higher), and five of those coaches competed at the professional level. When the coaches elaborated on the possible benefits of

playing the position of goal or the level they played, several coaches spoke passionately about the benefits of playing goal and the benefits of playing at a high level.

Position played: “Two for the price of one”

Many of the coaches felt that having played goal as an athlete allowed them to start their coaching careers as assistant coaches because of the need for goaltender coaches. One coach spoke about the desire many teams have to hire assistant coaches who formerly played goal to decrease a team’s payroll:

“I think it was a benefit especially early on when there wasn’t much money in hockey and they were getting an assistant coach and a goalie coach. Budget monetary constraints see that is how you need to sell yourself instead of adding on to the payroll, you are saving them payroll. They are getting two for the price of one.” (George)

Another coach felt that when he first sought coaching jobs the head coaches of teams he applied to wanted someone who played goal because working with players who occupied those positions was out of their grasp:

“I think it definitely does help out in the coaching and that enabled me a little bit as well. I know in both my first two jobs I got as an assistant both the head coaches liked the idea that I was a goaltender and I would work with their goalies so they didn’t have to deal with the strange breed that we supposedly are.” (David)

Another coach felt that having a staff member with goaltending expertise provided a compliment to the hiring team’s staff:

“When I started it was a nice convenience to hire an assistant coach that would be able to take time to work as a specialist in that area. It didn’t hurt that I played the position and

the other guys [coaches] felt more confident dealing with the skaters so they felt that helped round out their coaching staff” (Terry).

Nevertheless within this group of 11 coaches, there was one coach (Peter) who did not have the same success at obtaining assistant coach positions: “Earlier in my career I was limited by the coaches who felt that perhaps I could only offer the team something in that position [goal].” With no playing experience at the position of forward or defense to draw on, he felt that in retrospect he probably did not know a lot about the game outside of goaltending at the time.

Highest level played

The majority of the coaches felt that playing at the high-performance level influenced their career pathways and development as a coach in some way. To sum up how most coaches felt one coach spoke about the experience of playing at the level he currently coaches:

“Absolutely you see there is nothing better than experience” (George). One coach stated that it is difficult for coaches to gain credibility and respect in the sport if they have not, at minimum, played at the junior level:

“Oh 100% for anyone to be taken seriously in this game you have to have played the game at the very least at the junior level and obviously the players that played at higher levels that are or want to be coaches get more respect. They might be terrible teachers and terrible coaches and terrible influences but they will always get a leg up on somebody that hasn’t played at that level.” (Peter)

Another coach went into great detail to discuss and compare the opportunities coaches with different playing backgrounds may encounter throughout their coaching careers:

“The higher the level that you play and the longer you play I think there are more opportunities for you. My opportunities weren’t as great as a guy that played 15 years in

the NHL. The guy in the NHL has more contacts and his experience at playing at a high level affords him the opportunity to bring more to the table than the guy whose experience includes two years of minor professional hockey. That is not to say that the guy who played 15 years in the NHL would be a better coach automatically.” (William)

Adding to this, other coaches (Darcy, Natalie, Terry, Shawn, George) felt that it is easier for coaches who played at higher levels to obtain coaching jobs because of the relationships you build with people in power in hockey, the perception that you are worthy of coaching that you gain by having a resume complete with high levels of playing experience, the coach’s ability to relate to players because he or she played at that same level, and having previous experiences with the lifestyle of being a player at the level a coach seeks to be a head coach at.

In contrast two coaches felt that while playing hockey at high levels may have an influence on obtaining head coaching positions other factors contribute to being hired. For instance one coach felt that having a background in playing high-performance will help the aspiring head coach gain an interview but the rest is up to him or her: “At the end of the day if you don’t do a good job in the interview and selling yourself you won’t get the job no matter how much experience you have” (David). One other coach (Ian) felt that the highest level he played made no contribution to his climb through the coaching ranks; rather he feels that getting into coaching was pure luck. While peaking at junior hockey he never felt he would coach anything other than goaltenders in his hometown. However, after the head coach of the team he volunteered with was fired he took over as head coach of the team as a favour for the team’s president. The team’s president had notified Ian that he would be the interim head coach while he searched for a new coach. The president never did search for a new head coach who left Ian to fall in love with the profession and choose to quit his career outside of hockey to become a full

time coach. His success at that level spring boarded him to the next level where he would continue to have success and climb the ladder as a head coach.

Chapter Six: Discussion

Based on the content of the 11 interviews with high-performance head hockey coaches who formerly played goal the purpose of this study was to answer the research questions: (a) What are the career pathways that former goaltenders took to become high-performance head hockey coaches? (b) What forms of coach learning have contributed to their development as a coach? (c) How have the coaches' previous athletic experiences (i.e. highest level played and position played) afforded certain coaching opportunities?

Coach Pathways

The profiles of the high-performance head hockey coaches who formerly played goal and participated in this study support the findings from the literature (Erickson et al., 2007; Gilbert et al., 2006; Schinke et al., 1995; Werthner & Trudel, 2009) in that the coaches were competitive athletes (i.e. junior 'A' or higher) in the sport they coached. This high-performance playing experience might be useful to becoming high-performance head coaches (e.g., Erickson et al.; Koh, Mallet, & Wang, 2011; Schinke et al.). As an illustration coaches who have playing experience at the level they coach may have a better "understanding of athletes' needs and concerns, as well as high-performance training and coaching aspects" (Koh et al., 2011). Trudel and Gilbert (2006) reported that over 90% of elite sport coaches were competitive athletes in the sport they coach. In a review of multiple coach pathways studies, Mallett (2010) reported that all the coaches investigated had a minimum of five years playing experience in the sport they now coach. While this finding is consistent with the findings of the present study it is not clear whether all the coaches had reached the level they now coach at as an athlete.

Thus, studies (Erickson et al., 2007; Gilbert et al., 2006; Schinke et al., 1995) have reported that elite athletic experiences were an important aspect of expert coaches' career

development. However, Carter and Bloom (2009) found that based on the developmental paths of the six university coaches they investigated it was possible to become an expert coach without accumulating elite athletic experiences in the sport being coached. In the present study six of the head coaches have been head coaches at the same level they once played, three are currently head coaches of the same level they once played but of the opposite gender, one has never been a head coach at the level she played, and one coaches at a higher level than he played but of the opposite gender. It is interesting to note that of the six coaches who have at one time been head coaches at the same level they once played two of those coaches have exceeded their playing levels, coaching professional hockey without ever playing professional hockey. As a result, the findings of this study suggest that elite athletic experience are an important aspect of high-performance coaches' career development but not imperative.

According to Sage (1989) "Entry into coaching may take place at different times and under different circumstances" (p. 87). The findings of this study are consistent with Sage as each coach entered into coaching in their own unique fashion and at different points in their lives. When placed in comparison to the coach pathway model presented by Schinke et al. (1995) only certain portions of the coaches' pathways from this study were similar. All of the coaches in this study had early experiences of coaches they played for when they were early competitive athletes during the first career stage of elite coaching. After this stage there was much disparity in each coach's pathway in comparison to the coach pathway model presented by Schinke et al. (1995). Ten of the present study's coaches played at the National elite sport level and only two (Peter, William) participated at the International elite sport level. None of the coaches of this study coached at the novice level, three (Natalie, David, Shawn) coached at the developmental level, and all coached at the national elite level.

Like the comparison to the model provided by Schinke et al. the career pathway tables presented above displayed many similarities and differences to the career pathway model developed by Erickson et al. (2007). All of the coaches of the present study participated in sport in the diversified early sport participation level as suggested by Erickson and his colleagues. Additionally, all the coaches of this study participated in the competitive sport participation stage at age 13, and the highly competitive sport participation and introduction to coaching level at age 19. The major differences when making the comparison to Erickson et al. occurred at age 24 during the part-time early coaching stage. At this age only five coaches (Ian, Natalie, David, Shawn, George) in this study had begun their coaching careers as assistant coaches at the high-performance level. The other six coaches were still playing competitive hockey at either the collegiate or professional levels. The fifth stage, occurring at age 29, was characterized as obtaining a high-performance head coaching position that was often a full time and paid position. At age 29 only four coaches (Darcy, Ian, Natalie, Brent) of this study held head coaching positions at the high-performance level, while five were assistant coaches at the high-performance level (Peter, Terry, David, Shawn, George) and two (Matthew, William) were playing professional hockey.

Both of the above models provide guidance and an overview for how a coach's pathway should look. However, neither model provides an accurate depiction of the career pathways of the head coaches who participated in this study. Additionally, one model cannot be developed to provide a precise summary of the investigated coaches' pathways as a whole. As shown in the tables above each coach investigated has a unique pathway that has not been entirely duplicated by another coach when comparing them during the data analysis. As a result, our findings align

most closely with Werthner and Trudel (2009) who provide a reminder that each elite coach's pathway is idiosyncratic.

Coach Knowledge

According to Lemyre et al. (2007) the main source of reference for youth coaches to train their team, during their first year as a head coach, was their previous playing experience. Additionally their previous playing experience provided them with basic knowledge such as rules of the games and technical skills needed to do demonstrations during practices. Furthermore, it seems reasonable that a background in playing the sport can contribute to understanding the technical and tactical aspects of the sport (Jones, Armour, & Potrac, 2003). Inconsistent with the literature are the results of the present study indicating that seven of the eleven coaches felt, due to the nature of the position they played, they lacked the professional knowledge (Gilbert & Côté, 2013) to teach their team how to play strategically, make in game decisions, and articulate practice drills to their players when they first became head coaches.

Using the coaching, teaching, positive psychology, and athlete development literature Côté and Gilbert (2009) presented an integrative definition of coaching effectiveness and expertise which read "The consistent application of integrated professional, interpersonal, and intrapersonal knowledge to improve athletes' competence, confidence, connection, and character in specific coaching contexts" (p. 316). Côté and Gilbert (2009) reported that extensive knowledge is deemed to be a primary characteristic of expert coaches. The coaches of the present study lacked tactical (i.e. strategy) knowledge which is an attribute in Abraham, Collins, and Martindale's (2006) definition of professional knowledge. According to Abraham et al. (2006) professional knowledge is declarative knowledge in the sport sciences, sport-specific knowledge, and pedagogical knowledge with accompanying procedural knowledge. Due to the uniqueness of

the goaltending position and isolation from teammates with the introduction of goaltender coaches there is a lack of emphasis placed on tactical knowledge during their playing careers. Therefore, it was of utmost importance for the head coaches in this study to gain professional coaching knowledge immediately in order to obtain coaching positions.

Learning Situations Reported

Among each of the four common learning situations reported, important variations were found among the coaches regarding the role each of those learning situations played in their development. The learning situation titled “coach interactions” seems to have been used by all the coaches. Since coaches need a broad range of knowledge it can be advantageous to tap into their developing network of colleagues to continue their development. According to Jarvis, Holford, and Griffin (1998) “We learn from and alongside other people in all our social relationships” (p. 37). The coaches indicated they interacted with other coaches at hockey arenas, meetings, by telephone, and at coaching clinics. The data suggested that not only will all coaches interact with members of a current coaching staff but will also interact with members of a former coaching staff with whom they acted as an assistant or head coach. Previous studies have reported that coaches will not exchange information with many coaches (Lemyre et al, 2007; Wright et al., 2007). These studies contend they will only exchange information with their team’s staff and association because the desire to win brings them to see coaches of other teams as opponents. Additionally, Trudel and Gilbert (2004) stated that a community of practice of coaches cannot be found because coaches do not want to share their secrets with opponents so they can defeat them. Conversely, in the present study some coaches were actually open to the idea of sharing information and knowledge with coaches who coached within the same league if it had an important purpose. These purposes included coaching a country at a World

Championship or the Olympics. Furthermore, one coach included that he would exchange game film with other team's coaches one day in advance of a game in order to prepare for the upcoming contest.

As reported in other studies (Gilbert & Trudel, 2001; Wright et al., 2007), all of the coaches interviewed for this study indicated that books and videotapes provided them with specific coaching knowledge. Books provided knowledge for many different aspects of coaching such leadership, sport psychology, business, nutrition, strength and conditioning, strategies, tactics, and skill development. Regarding videotapes, the results indicated that all of the head coaches had mostly used game film (one used instructional videos as well) mostly for tactical purposes, to track opposing team strategies, and to understand the "Xs and Os". Considering that coaching is a complex task, and that coaches require a broad range of various forms of knowledge related to coaching and the sport in which they coach (Cushion et al, 2003; Lyle, 2002) it is understandable that game film and many different books could contribute to a coach's learning.

Coaching clinics, seminars, and conferences are usually learning situations that are generally offered by local minor hockey associations for coaches wishing to advance their coach knowledge. In the case of some coaching clinics, they can be made available through a professional hockey team's marketing program or by those who work in professional hockey (e.g., Hockey Atlantic Coaches Clinic, Ottawa Senators Coaches Clinic, Roger Neilson's Coaches Clinic). Not all of these clinics, seminars, and conferences provide coaches, hoping to learn, with certification. In fact not all levels require coaches to hold specific certifications (e.g., NCAA, Professional) (Gilbert et al., 2006). Countries such as the United States do not have a mandatory or standard national coaching certification program and many coaches of other states

are not required to have any formal certification. As a result, many of the coaches investigated do not hold any form of coaching certification and one coach (George) has never been to any form of coaching clinic in his life. The coaches who have participated in coaching clinics and continue to attend only make themselves present at those that do not require certification (e.g., Roger Neilson's Coaches Clinic). As shown in other studies (Lemyre et al., 2007; Nelson, Cushion, & Potrac, 2011), the importance of these coach education programs and what is learned differs from coach to coach. It is also important to note that although this learning situation has been designed to teach essential coaching knowledge and sport specific skills many of the coaches felt the biggest bonus of attending coach clinics was the network of contacts and relationships with other coaches that can be developed. This finding should be of particular interest for former goaltenders that have limited coach networks and relationships and are seeking to become coaches.

In regards to academic education, the results indicated that nine of the eleven coaches held at least a bachelor's degree, three have master's degrees, and two hold no secondary education diplomas. This is very close to Trudel and Gilbert's (2006) report that the vast majority of elite sport coaches hold at least an undergraduate college degree. It is also worth noting that all of the coaches who were born in the United States held at least an undergraduate degree. This is consistent with the report by Cullen, Latessa, and Byrne (1990) which states that typically 100% of elite development coaches in the United States have a college degree. Of particular interest is the report that many coaches, who studied education for undergraduate degrees, emphasized how the program facilitated their learning. Since coaching is a complex task and a profession that requires coaches to possess different types of knowledge (Lyle, 2002:

Cushion et al., 2003; Gilbert & Côté, 2013) it should be important to understand that different undergraduate programs, specifically education, can contribute to a coaches learning.

According to Mallett (2010) self-reflection is of extreme importance in making one's experiences meaningful and subsequently developing one's coaching knowledge and refining coaching practices. Salmela (1994) put forward that expert coaches drew upon their expert athletic experiences to help develop their coaching knowledge, philosophy, and beliefs. In the present study, the coaches reported that they would reflect on their past as athletes as a means to communicate with athletes they coach about hardships, overcoming obstacles, and achieving their goals. The coaches' knowledge, philosophy, and beliefs were formed by their experiences with coaches as an athlete and coach. Often the coaches reported that they would take notice of how their teams played based on each head coach's teachings, ability to communicate, and demeanour. From these notes they would eliminate what they deemed as negative coaching experiences (e.g., throwing water bottles) and remember positive coaching experiences (e.g., strong communication skills) and attempt to build their own coaching persona.

Some coaches begin as assistant coaches and some begin as head coaches. Of the coaches investigated in this study nine started as assistant coaches and two (Brent, David) started as head coaches. According to Sage (1989) in the role of an assistant coach the apprentice has an opportunity to work with an informal mentor, have his coaching critiqued, and acquire a set of understandings and ways of acting that arise in response to the problems of coaching.

Additionally,

Observing the behavior of more experienced coaches during practices and games and listening to the "war stories" veteran coaches tell when coaches are together during informal periods in the coaches locker room, lunch room, or coffee room about persons,

past events, places, and relationships makes its mark on young coaches regardless of whether they began as assistants or head coaches. It is largely through these types of experiences that collective understandings begin to develop, and the shared meanings about the occupational culture of coaching starts to take shape for the new coach. (Sage, 1989, p. 88).

Many of the coaches from the present study spoke adamantly about the positive effects a number of coaches had on their coaching careers. Whether the experiences were positive or negative the important point they attempted to make was that something was learned from each coach they encountered.

Career Opportunities Afforded to Coaches Based on Athletic Experiences

As mentioned earlier, amongst the coaches studied by Gilbert et al. (2006) it was found that an accumulation of thousands of hours of athletic participation in organized sport for an average of at least 13 years was a common characteristic of elite coaches. All of the coaches of the present study had accumulated several thousands of hours of athletic experience prior to transitioning to coaching as the youngest age for retirement from playing hockey was 20 years old. Unfortunately Gilbert et al. (2006) did not specify which levels the elite coaches accumulated all their athletic participation hours in and whether the levels they accumulated their athletic experience in were a determinant for coaching opportunities afforded.

Athletes who have a long playing career are generally better athletes than those playing for a brief period (Loy, Sage, & Ingham, 1970). As a result, it is likely that the former will gain fame and prestige that could help them to gain better opportunities in the labour market (e.g., coaching) when they retire (Loy et al., 1970). The results of the present study are mostly consistent with this observation. Nine of the head coaches held similar opinions that having

athletic experiences at the level they coach has afforded them opportunities to coach at the level they played because they understand the lifestyle and athletes needs, have knowledge of high-performance training and coaching aspects, and have previously built a network of coaches at that level. Conversely, two of the head coaches (Ian, Brent) who coached professionally felt that the highest level they played had no effect on the coaching opportunities they were afforded throughout their careers. This opinion is justifiable given that these two coaches respectively played one (Ian) and six (Brent) years of high-performance hockey with neither coach reaching the professional level. Furthermore, their opinions are consistent with the findings of Erickson et al. (2007), Salmela (1994), and Young et al. (2009) that experience as an elite athlete at the level that coaches now practise their trade at was not a necessary requirement to high-performance coaching.

Like the highest level achieved as an athlete, the literature reviewed (Grusky, 1963; Loy et al.; Roy 1974) has forwarded results that state position played can be a determining factor in career opportunities afforded to coaches. According to Loy et al. some positions would generate more leaders simply because they demand more sport-specific expertise. This role prerequisite means that certain positions will be perceived as more valuable and attractive regardless of who occupies them (Loy et al., 1970). According to Grusky's (1963) theory, occupants of certain formal key positions (i.e. infielders and catchers) were more likely than occupants of other positions (i.e. infielders and outfielders) to become managers of baseball teams. Pitchers and catchers are the leaders on a baseball diamond because they often relay information from the manager or provide instruction to their teammates throughout a game. In hockey athletes who play formal key positions are the centremen and defensemen (Eskenazi, 1972). This is based on their spatial location to other positions, the nature of the task associated with the position, and

frequency of interaction with other players of other positions on the ice (Eskenazi, 1972). Therefore, based on Grusky's theory, centremen and defensemen might be afforded more opportunities to become coaches than those who play wing or goal.

In the past 10 NHL seasons there have been 9 head coaches who played goal (8%), 66 head coaches who played forward (60%), 29 head coaches who played defense (26%), and 6 who have no record of playing hockey (6%) (HockeyDB, 2013). While, at first glance, these numbers might support Grusky's (1963) theory we must remember that each NHL team is comprised of a roster of 23 players; of which 2 are goaltenders, 7 are defensemen, and 14 are forwards. There are 30 teams in the league which gives a total of 690 players. Since goaltenders only make up 9% of the league it would only make sense that there are not as many head coaches who played goal in the past 10 NHL seasons as there are head coaches who played forward or defense. Additionally, 10 of the head coaches who participated in this study felt passionately that playing goal provided them with an entry into coaching at the high-performance level. Many of the coaches spoke about first being hired as an assistant coach who could also coach the team's goaltenders as a means to decrease a team's payroll. These findings raise even more questions about the predictive validity of Grusky's concept of interaction-based centrality at least in the selection of head hockey coaches, suggesting that high levels of professional interaction do not necessarily correlate with future opportunities for former goaltenders to become head coaches.

Implications

The findings of the present study provide some insight into the context of coaching high-performance hockey. The contribution of the current study is that it examined the career pathways of high-performances head hockey coaches who formerly played goal, which was not found in the existing sport coaching literature. This study also highlighted some of the unique

situations through which these former goaltenders became coaches, how they learned to coach, and whether their athletic experiences afforded them coaching opportunities. Based on the learning situations reported coach education programs can highlight the key ways in which coaches learn. As suggested by Carter and Bloom (2009), an increased awareness that coaches learn most frequently through coaching experiences and interactions with other coaches can encourage coach education programs to add more practical elements to their coach training programs. For example, ensuring that developing coaches have mentor coaches with whom they work both in their coaching context and observing the mentor coach in his or her coaching context.

Like formal mentorship coach development administrators need to consider the isolation of goaltenders and the consequences it may have on goaltenders who aspire to become head coaches. As previously mentioned, hockey has changed to point where all teams from the major junior level (i.e., OHL, QMJHL, WHL) and above employ goaltending coaches with some teams employing as many as two. Due to the distinct nature of the position goaltenders will often work with the goaltender coach while the team works on strategic and systematic play. As a by-product goaltenders do not have the chance to develop an understanding of the technical and tactical aspects of hockey. For that reason two suggestions can be presented: (1) Coaches should strive to keep goaltenders involved with team concept activities as much as possible; (2) Additional tactical and technical seminars, clinics, or conferences should be provided to aspiring coaches who played goal in order to facilitate their coach education needs.

Limitations and Future Directions

Although this study's results contribute to the literature and an in-depth look at the learning situations and career pathways reported by high-performance head hockey coaches who

formerly played goal, it has a number of limitations. First, given the unique focus on the career pathways and learning situations of high-performance head hockey coaches who formerly played goal caution is warranted in generalising the findings to other positions within the sport of hockey or other sports. Second, the small sample size limits the generalizability of the results. It was preferred that all head coaches who formerly played goal participate in the research; however, some of the potential candidates could not be reached due to lack of contact information available. Moreover, many of the study candidates did not respond to e-mails or phone calls during the recruitment period. Outside of their careers and family obligations many high-performance head coaches may have not had time to participate in the study. However, this is not a true limitation because the purpose of this study was to understand individual experiences of the coaches with regard to situations they learned, career pathways, and whether the position they played and highest level attained as an athlete afforded coaching opportunities. Furthermore, Guest, Bunce, and Johnson (2006) hold that saturation is achieved after 12 interviews, but if homogeneity is present among the participants metathemes will emerge after as few as 6 interviews.

A third limitation of this study was only one interview per head coach was conducted. Due to the timing of the data collection period (i.e. June – September 2010), the scheduling challenges inherent in coordinating the interviews with the coaches during the data collection period, and the understanding that the head coaches were about to begin their respective seasons it was difficult to pursue a follow up interview. To help address this shortcoming probe questions (approximately three) were sent with the interview transcript to each coach via e-mail to augment the data previously collected. Each coach's responses were added to their interview transcripts for analysis.

A fourth limitation of this study was not enough measures were taken to ensure proper snowball sampling occurred. Matthew, William, Ian and Brent have all had rather lengthy careers as coaches in professional hockey. Therefore, during the interviews with these coaches, I should have placed more emphasis on inquiring about other professional head coaches who formerly played goal or former professional goaltenders who are currently head coaches at lower levels of high-performance hockey (i.e. collegiate or junior). To help address this shortcoming I did contact the coaches I interviewed to ask about other study candidates but they were not able to be reached.

A fifth limitation of this study was that none of the interviews could be conducted in person. Unfortunately, all the coaches interviewed resided in locations distant from my base. Due to lack of funding and time it made it impossible to either travel to or bring these coaches to the University of Ottawa to interview them. To help address this drawback the interviews were conducted via telephone; however using the telephone was not always a convenient process. During interviews with three separate coaches there was numerous times in which I requested them to repeat things they said because the service areas they were in were not ideal. At three points while interviewing one of the coaches in poor service areas I had to hang up and call him back. A fourth coach set an interview time with me but did not answer his phone when I called. Luckily he called me back the next day, but at a time when I was not in possession of a voice recorder. For fear that I would not have another opportunity to interview him I managed to put him on speakerphone and use the voice recorder on my computer. After completing an interview with a fifth coach I found that the audio recording was extremely poor quality. Consequently, I was not able to transcribe the entire interview with him due to the poor sound quality. A sixth gave, in my opinion, a very poor and short interview because he elected to have dialogue with

me while he was driving. He insisted that he did not have another time to do the interview and the only time to do it was while he was driving. Under those circumstances it made it difficult to garner focused and descriptive responses from him. When sent probing questions through email his answers were much more in-depth and descriptive.

Given these limitations future research should continue to examine: (1) how playing a certain position in sport can influence coaching opportunities afforded, (2) how achieving a certain level of play as an athlete can influence coaching opportunities afforded, (3) the learning situations reported by coaches of certain positions and how they learned how to coach other positions, other sports, and whole teams, and (4) the career pathways of head coaches of different positions within a sport (e.g., hockey).

Conclusion

The purpose of this study was to examine the career pathways of 11 high-performance head hockey coaches who formerly played goal. The results indicated that the coaches learned most from coach interactions, books and videotapes, experiences related to coaching and playing, and coach clinics and university education. Based on the career pathways discussed and shown above, despite some minor similarities, it is evident that each coach's pathway was quite idiosyncratic. Most of the coaches felt that the highest playing level they attained as an athlete was a key, but not the only contributor to the career opportunities they were afforded. Additionally, the majority of the coaches felt, contrary to the literature reviewed, that they were afforded coaching opportunities early in their career based on the position they had played. With their goaltending experience they were able to add a dimension to the coaching staff that coaches who played other positions could not. They were able to be an assistant or head coach who could also coach goaltenders. Future research should continue to examine the pathways and learning

situations of high-performance coaches, specifically of other positions and sports, to enrich our knowledge in this body of research.

References

- Abraham, A., Collins, D., & Martindale, R. (2006). The coaching schematic: Validation through expert coach consensus. *Journal of Sports Sciences*, 26(6), 549-564.
- Bishop, D., Burnett, A., Farrow, D., Gabett, T., & Newton, R. (2006). Sports-science roundtable; Does sports-science research influence practice? *International Journal of Sports Physiology and Performance*, 1(2), 161-168.
- Braddock II, J. H., Smith, E., & Dawkins, M. P. (2012). Race and pathways to power in the National Football League. *American Behavioral Scientist*, XX(X), 1-17.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology, *Qualitative Research in Psychology*, 3, 77-101.
- Carter, A. D., & Bloom, G. A. (2009). Coaching knowledge and success: Going beyond athletic experiences. *Journal of Sport Behavior*, 32(4), 419-437.
- Chu, D. B., & Segrave, J. O. (1981). Leadership recruitment and ethnic stratification in basketball. *Journal of Sport and Social Issues*, 5(13), 13-22.
- Côté, J., & Gilbert, W. (2009). An integrative definition of coaching effectiveness and expertise. *International Journal of Sports Science & Coaching*, 4(3), 307-323.
- Côté, J., Salmela, J., Trudel, P., Baria, A. & Russell, S. (1995). The coaching model: A grounded assessment of expert gymnastic coaches' knowledge. *Journal of Sport and Exercise Psychology*, 17(1), 1-17.
- Creswell, J. W. (2007). *Qualitative inquiry and research design: Choosing among five approaches*. Thousand Oaks, California: Sage Publications.
- Creswell, J. W. (2013). *Research design: Qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, California: Sage Publications.

- Crotty, M. (2010). Constructionism: The making of meaning. *The foundations of social research* (pp. 42-65). London, England: Sage Publications.
- Cullen, F., Latessa, E., & Byrne, J. (1990). Scandal and the reform in collegiate athletics: Implications from a national survey of head football coaches. *Journal of Higher Education*, 6(1), 50-64.
- Culver, D., Gilbert, W., & Sparkes, A. (2012). Qualitative research in sport psychology journals: The next decade 2000-2009 and beyond. *The Sport Psychologist*, 26, 261-281.
- Cushion, C. J., Armour, K. M. & Jones, R. L. (2003). Coach education and continuing professional development: Experience and learning to coach, *Quest*, 55, 215– 230.
- De Marco, G. M., & McCullick, B. A. (1997). Developing expertise in coaching: Learning from the legends. *Journal of Physical Education, Recreation & Dance*, 68(3), 37-41.
- Dungy, T., & Whitaker, N. (2007). *Quiet strength: The principles, practices, and priorities of winning life*. Carol Stream, Illinois: Tyndale House Publishers.
- Elite Prospects. (2013). Retrieved from www.eliteprospects.com.
- Erickson, K., Côté, J., Fraser-Thomas, J. (2007). Sport experiences, milestones, and educational activities associated with high-performance coaches' development. *The Sports Psychologist*, 21, 302-316.
- Eskenazi, G. (1972). *A thinking man's guide to pro hockey*. Boston, Massachusetts: E. P. Dutton and Company Inc.
- Fischer, E., & Parmentier, M-A. (2010). Doing qualitative research with archival data: Making secondary data a primary resources. In M. C. Campbell, J. Inman, & R. Peters (Eds.), *Advances in consumer research*. Duluth Minnesota: Association for Consumer Research.

- Gilbert, W., & Côté, J. (2013). Defining coaching effectiveness: Focus on coaches' knowledge. In P. Potrac, W. Gilbert & J. Denison, *Routledge Handbook of Sports Coaching* (pp. 147-159). London: Routledge.
- Gilbert, W., Côté, J., Mallett, C. (2006). Developmental paths and activities of successful sport coaches. *Journal of Sports Science & Coaching*, 1(1), 10-12.
- Gilbert, W., & Trudel, P. (2001). Learning to coach through experience: reflection in model youth sport coaches. *Journal of Teaching In Physical Education*, 21(1), 16-34.
- Goff, B. L., & Tollison, R. D. (2008). Racial integration of coaching: Evidence from the NFL. *Journal of Sports Economics*, 10(2), 127-140.
- Grusky, O. (1963). The effects of formal structure on managerial recruitment: A study of baseball organization. *Sociometry* 26(1), 345-353.
- Guest, G., Bunce, A., & Johnson, L. (2006). How many interviews are enough?: An experiment with data saturation and variability. *Field Methods*, 18(1), 59-82.
- Hardin, B. (2000). Coaching expertise in high school athletics: Characteristics of expert high school coaches. *Applied Research in Coaching and Athletics Annual*, 15, 24-38.
- Hockey Canada. (2013). National coaching certification program. Retrieved from http://www.hockeycanada.ca/index.php/ci_id/6887/la_id/1.htm
- Jarvis, P., Holford, J., & Griffin, C. (1998). *The theory and practice of learning*. London, Kogan Page.
- Jones, R, L., Armour, K, M., Potrac, P. (2003). Constructing expert knowledge: A case study of a top-level professional soccer coach. *Sport, Education and Society* 8(2), 213-229.
- Kidd, B. & MacFarlane, J. (1972). *The death of hockey*. Toronto: New Press.

- 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.
- Lemyre, F., Trudel, P., & Durand-Bush, N. (2007). How youth-sport coaches learn to coach. *The Sport Psychologist*, 21, 191-209.
- Lincoln, Y. S., Lynham, S. A. & Guba, E. G. (2011). Paradigmatic controversies, contradictions, and emerging confluences, revisited. In N.K. Denzin & Y.S. Lincoln (Eds.), *The Sage handbook of qualitative research* (4th ed.), (pp. 97-128). Thousand Oaks, California: Sage Publications.
- Loy, J. W., Sage, J., & Ingham, A. (1970). The effects of formal structure on organizational leadership: An investigation of varsity baseball teams. Paper presented at the 85th national convention of the American Association for Health, Physical Education and Recreation, Seattle, Washington.
- Lyle, J. (2002). The role of a coach. In J. Lyle (Ed.), *Sports coaching concepts*, (pp. 59-76). New York, New York: Routledge.
- Madden, J. F. (2003). Differences in the success of NFL coaches by race, 1990-2002: Evidence of last hire, first fire. *Journal of Sports Economics*, 1-20.
- Mallett, C. J. (2010). Becoming a high performance coach: Pathways and communities. In J. Lyle & C. Cushion (Eds.), *Sports coaching: Professionalism and practice* (pp.119-133). London: Elsevier.
- Mallett, C.J., Trudel, P., Lyle, J. & Rynne, S.B. (2009). Formal vs informal coach education. *International Journal of Sports Science and Coaching*. 4(3), 325-334.

- Maxwell, J. A. (2005). *Qualitative research design* (2nd Ed.). Thousand Oaks, California: Sage Publications.
- McNab, T. (1990). Chariots of fire into the twenty first century. *Coaching Focus*, 13, 2-5.
- Merriam, S. B. (2009). *Qualitative research: A guide to design and implementation*, San Francisco, California: John Wiley & Sons.
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook*. Thousand Oaks, California: Sage Publications.
- Moon, J. (2006). *Learning journals: A handbook for reflective practice and professional development*. New York, NY: Routledge.
- Nelson, L., Cushion, C., & Potrac, P. (2011). Enhancing the provision of coach education: The recommendations of UK coaching practitioners. *Physical Education and Sport Pedagogy*, 1-15.
- QSR International (2010). NVivo (Version 10) [Software]. Available from <http://www.qsrinternational.com/products.aspx>
- Roy, G. (1974). *The relationship between centrality and mobility: The case of the National Hockey League* (Master's thesis). Retrieved from SPORTDiscus. (SPH337196).
- Sage, G. H. (1989). Becoming a high school coach: from playing sports to coaching. *Research Quarterly for Exercise & Sport*, 60(1), 81-92.
- Salmela, J. H. (1994). Learning from the development of expert coaches. *Coaching and Sport Science Journal*, 1, 1-11.
- Schinke, R. J., Bloom, G A., & Salmela, J. H. (1995). The career stages of elite Canadian basketball coaches. *Avante*, 1, 48-62
- The Internet Hockey Database. (2013). Retrieved from <http://www.hockeydb.com>.

- Trudel, P., & Gilbert, W. (2013). The role of deliberate practice in becoming an expert coach: Part 3- Creating optimal settings. *Olympic Coach Magazine*, 24(2) 15-28.
- Trudel, P., & Gilbert, W. (2004). Communities of practice as an approach to foster ice hockey coach development, in D. J. Pearsall & A. B. Ashare (Eds) *Safety in ice hockey* (West Conshohocken, PA, ASTM International), 167-179.
- Trudel, P., & Gilbert, W. (2006). Coaching and coach education. In D. Kirk, M. O'Sullivan, & D. McDonald, *Handbook of physical education*, (pp.516-539). London: Sage Publications.
- United States College Hockey Online. (2013). Player search. Retrieved from www.uscho.com.
- Walsh, B., Jamison, S., & Walsh, C. (2010). *The score takes care of itself: My philosophy of leadership*. New York, New York: Penguin Group.
- Walton, G. M. (1992). *Beyond winning: The timeless wisdom of great philosopher coaches*. Champaign, Illinois: Leisure Press.
- Weiss, R. (1994). *Learning from strangers: The art and method of qualitative interview studies* (p. 222), New York, New York: The Free Press.
- Wengraf, J. (2001). Models of research design and their application to semi-structured depth interviewing. In J. Wengraf (Ed.), *Qualitative research interviewing* (pp. 51-60), Thousand Oaks, California: Sage Publications.
- Werthner, P., & Trudel, P. (2006). A new theoretical perspective for understanding how coaches learn to coach. *Sport Psychologist*, 20(2), 198-212.
- Werthner, P., & Trudel, P. (2009). Investigating the idiosyncratic learning paths of elite Canadian coaches. *International Journal of Sports Science & Coaching*, 4(3), 433-449.

- Williams, S. J., & Kendall, L. (2007). Perception of elite coaches and sports scientists of the research needs for elite coaching practice. *Journal of Sports Science*, 25(14), 1577-1586.
- 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.
- Wooden, J., & Jamison, S. (2005). *Wooden on leadership*. New York, New York: McGraw Hill.
- Wright, T., Trudel, P., & Culver, D. (2007). Learning how to coach: the different learning situations reported by youth ice hockey coaches. *Physical Education & Sport Pedagogy*, 12(2), 127-144.
- Yin, R. K. (1994). *Case study research. Design and methods* (2nd ed.). Thousand Oaks, California: Sage Publications.
- Young, B. W., Jemczyk, K., Brophy, K., & Côté, J. (2009). Discriminating skilled coaching groups: Quantitative examination of developmental experiences and activities. *International Journal of Sports Science & Coaching*, 4(3), 397-414.

Appendix A

INTERVIEW GUIDE – High-Performance Head Hockey Coaches who Played Goal***Researcher introduction; project introduction; consent form.***

1. How many years of experience do you have as a coach?
 - a. Are you involved in coaching still?
 - b. What level(s) do you currently coach?
2. What sort of athletes are you working with, that is, please describe their context?
 - a. How old are they?
 - b. How often do they compete and practice?
 - c. How long is their season?
3. Can you discuss your playing career before becoming a coach?
 - a. For how many years did you play?
 - b. At what level of competitiveness?
 - c. What was the highest level you played?
4. Can you discuss your coaching pathway from start to finish?
 - a. In what situation did you start to coach?
 - i) Can you discuss the transition from playing goal to coaching an entire team?
 - ii) Barriers/facilitators/examples/details?
 - b. Where does your interest in coaching come from?
 - i) What inspired this interest?
5. What type of formal education do you have?
6. Did you take any formal coach training BEFORE becoming a coach?
 - a. Which one(s)? Provided by (NCCP, NSO, etc)?

7. Have you taken any formal coach training SINCE becoming a coach?
 - a. Which one(s)? Provided by (NCCP, NSO, etc)?
8. Can you tell me about any other learning experiences that may have fostered your development as a coach?
 - a. Books and videotapes.
 - b. Personal experiences related to playing and coaching hockey.
 - c. Family.
 - d. Interactions with other coaches.
 - e. Formal Mentoring.
 - f. The Internet.
 - g. Television.
 - h. Scouting.
 - i. Other.
9. Has there been anyone who has been a positive influence on your coaching career?
 - a. If so can you describe how this person(s) has been a positive influence?
10. Has there been anyone who has been a negative influence on your coaching career?
 - a. If so can you describe how this person(s) has been a negative influence?
11. Do you feel the position you played had an influence on the coaching opportunities you have been afforded throughout your career?
 - a. Why/Why not?
 - b. Can you provide an example(s)?
12. Do you feel the highest level you competed at had an influence on the coaching opportunities you have been afforded throughout your career?

- a. Why/Why not?
 - b. Can you provide an example(s)?
13. Do you intend to continue coaching?
- a. At the current level?
 - b. For how long?
 - c. Do you have any intentions or goals to coach at a different level?
 - d. Why?
14. Often in life we are presented with different opportunities and we have to choose between those opportunities. Did this happen to you in your coaching career?
- a. If so can you tell me about it?
15. Do you have any advice for a former goaltender who wishes to become a high-performance head coach?
16. Is there anything else you would like to share?

Thank the participant, explain member check process.

Appendix B

Bracketing Interview

01/17/2011

Montpetit Hall

Time: 23 Min 21 Sec

N: Neale (Interviewer)

T: Travis (Respondent)

N: Alright Travis, thanks for taking the time today to do this bracketing interview. Thank you for giving me the questions before hand and hopefully we can use this to help you out on your path to your thesis.

T: Thank you, no problem.

N: If you are ready to go we can get started.

T: Alright let's do it.

N: Alright so your thesis will be on what theme?

T: Well it is going to focus mainly on coach pathways of high performance coaches who formerly played goal. So I am specifically only looking at head coaches from the NHL level down to the major junior level.

N: Okay so that would be the context that you are looking at in terms of hockey from major junior and through to the NHL?

T: Yes and they are only research worthy, I guess, if they played goal. If they played another position such as forward or defense then I will not be, um, interviewing or researching their backgrounds.

N: Okay. You mentioned NHL and major junior, does that mean that you will be staying focused on North America or?

T: Yes it is going to be North America so that means NHL, AHL, ECHL, major junior, uh, I am also looking to include NCAA as well, but it is going to all mostly North America.

N: Okay and what is your experience as a coach?

T: Well this is my second year of coaching. I coached last year in the US for a year as an assistant with a university team and this year since I have moved to Ottawa I am an assistant coach of a Midget AAA team and I find it a lot different than coaching at the university level. Number one reason is I found it really easy to relate to the guys last year because I was just a year or two older than them so it would be easy to joke around with them, it would be easy to take it serious with them as well whereas this kids are four, five, six years younger than the people I was dealing with so I feel like I cannot be a complete friend, I need to be more of an authority figure with them. So that has been a bit of an adjustment for me.

N: Okay and have you coached anything else?

T: Uhhh

N: Other than hockey?

T: Oh anything other than hockey? Ummm no. I have only ever worked in hockey schools, hockey camps, things like that, but nothing other than that.

N: So you have some experience coaching hockey outside the years two years then?

T: Yes I have always worked at goalie camps as I was a former goaltender myself. I have always worked at goalie camps in the summer time. I have worked at three different ones. Most recently I have worked at camp in Mississauga called Jon Elkin's goalie school and I have been there for the past four years.

N: You mentioned you were a goalie. What is your experience as a player? Obviously as a goalie, but.

T: I played NCAA hockey in the US and before that I played four years of junior A hockey, three years in Saskatchewan and one year in New Brunswick and I moved away from home for hockey when I was 16 years old. So I played hockey in Newfoundland, where I am from, until I was 16 at the minor hockey level and that's really it. I would have liked to continue with my hockey after I finished playing NCAA, but there wasn't anything concrete in terms of a professional contract. It was more of a minor pro try out contract and it didn't look too appealing to me in terms of how much money I was going to make per week. I felt like I couldn't really live off two hundred dollars per week.

N: Are you playing at all now?

T: No, not at all. I have been so wrapped up in coaching that I haven't really given myself time to play. Actually last night was the first time that I had the pads on in a long time. My team, one of my team's goalies was sick so I brought my pads to practice and played. I was kind of

surprised; I hadn't had my gear in about eight months. I know I was playing against guys who are a lot younger than me, but I felt pretty good out there.

N: Cause goalies are hot commodities for men's leagues. Ha ha

T: They are hot commodities! Ha

N: Earn some money!

T: Yea!

N: Alright and you said that you are really wrapped up in your coaching right now. So why is that you coach? Why do you coach?

T: Uhh well I coach for two reasons. Number one is I feel that a coach can almost be a second parent figure for you know adolescents and guys playing at the university level, junior level as well because you have your parents, but when you move away from home to play junior or university your coach almost becomes your father or mother figure and I feel like coaches have a great opportunity to help young men grow into adults who will eventually become great husbands, fathers, and great in their careers. The second reason why I coach is more of a personal reason. I always really wanted to (pause). I always had the goal when I played to make it to the NHL, but now that I am not playing I have the goal that I want to coach in the NHL. I kind of made that goal for myself when I was 21 in my first year of university because one day playing is going to be over for me and one day I am going to have to do something else so coaching is my goal for my career.

N: Okay, so what are you doing outside of coaching right now that will contribute to that?

T: Well I believe that the program that I am doing right now will help me. Specifically last semester I remember doing a sport psych class with Dr. Brad Young. I learned a lot about how to talk to athletes, what could and could not be going through their head when they are in a slump or at their best. I have been taking some courses through hockey Canada. I recently just completed my developmental 1 so I am hoping that in the summer time I will be able to move onto high performance 1 and I have also been doing a lot of reading, a lot of books by former head coaches. I am actually reading a book now by John Wooden, so I try to take a little bit from everything I read and incorporate it into my coaching as well.

N: Cool. So shifting focus back to your thesis, you mentioned you specifically wanted to look at goaltenders who have gone on to become head coaches in the various leagues that you mentioned. How are you going to identify those people? How are you going to find them?

T: Well what I have been doing, right now, is I have been looking at online hockey databases. One is the internet hockey database and the other is called Elite Prospects and basically what I

am doing is I am taking all the coaches in each league from the past 10 years and then I am searching them on these hockey databases and I am trying to find out what position they played. It is really easy; the databases are all up to date. The databases tell you where they played junior, where they played pro, what position they played, how much they weigh, how tall they are. So from there I take the ones that played goal and I throw them in an excel database and hopefully from there I will be somehow be able to get in contact with them because I have also kept their information as to where they currently coach as well and it seems like a lot of them who coached at the NHL level or AHL, it seems like they are coaching at the junior level now and if I just go on a junior hockey team website the coach's e-mail and contact information is usually there so I feel like it should be pretty easy to contact them because I have had a lot of success in identifying them.

N: Further to identifying them you have identified whether the coach played goal. Does it matter what level the coach made it to as a goalie? Is that something you have considered?

T. Umm I have a little side research that I am doing with my supervisor and Brad Young. We are trying to find out whether coaches if they played at the NHL level would that make a difference if they could make it to the pinnacle of coaching which is the NHL. So that is a little side thing that I am doing trying to find out if, yeah, if they played goal at the NHL level will they have a better chance of coaching at the NHL level, but I don't really know right now if that is the case or not.

N: Okay and do you think that goaltenders would make good head coaches?

T: Well we shouldn't limit it to just goaltenders. Anyone can be a great coach, playing experience doesn't matter – look at Ken Hitchcock. However, if we look at goaltenders in specific I am on the fence about it. One side of me says that they could know a lot about the game because they are positioned in such a way that they can see the whole length of the ice. The other side of me (my playing side) says that as a goaltender who aspires to be a head coach you have to work so much harder than a forward or defenseman to learn team tactics. I remember when I played I never paid attention to the coach when he was drawing up drills or doing team video because all I had to worry about was my own game, stopping the puck, and shooter's tendencies. I feel that a lot of coaches who formerly played goal would be in the same boat as me.

N: Cool. So staying on that same theme of identifying coaches again you mentioned that you will be looking at high performance coaches who are at the pinnacle so NHL coaches. Who do you think is in the best position to judge or to define what makes a high performance coach?

T: Uhh I read a couple of weeks ago, I don't recall the author, I believe it was Gordon Bloom from McGill and one of his articles had a definition of high performance coaches and he said that a high performance coach is someone who (pauses) works full time, that is their job. Their job is

to be a coach, they don't have a secondary job. I feel like at the junior level and above all these coaches are employed full time. So I think the best people to define high performance coaches are researchers, but I also think it could be coaches as well because you know they are the ones with all the credentials so they could define who they are. Then you also have the athletes as well because when I was playing I had a couple of coaches who could be defined as high performance, but I didn't really deem them as high performance because I didn't think they were a very good coach. So I guess the best person to say would be the researchers or coaches.

N: Okay, so you mentioned you were sort of equating the ability of the coach to high performance. What about athletes or maybe officials or other people involved in the game.

T: I hadn't really thought about officials, I think that they could decide whether the coach is high performance or not based just on their interaction with them throughout a game and how they handle situations and the calls made and the coach doesn't agree with it or something of that nature but it's not really something I've considered and maybe I should consider it. I just haven't really thought about how to go about doing that.

N: And athletes? Has that entered the equation at all? Do you think about athletes and how they define it?

T: Yea, I do. Like I said, when I played I had high performance coaches coach me but I didn't feel like they were high performance coaches at some points. Some were, some weren't; I didn't really agree with their coaching methods. The ones that I did think were high performance coaches I did agree with their methods. (Pause) So I think athletes definitely could, definitely could ah categorize coaches as high performance or not.

N: Okay. And just further to that, I see in the questions you prepared you also had athletic director so you thought about maybe athletic director I guess that would work at the NCAA type level but what about the sort of the administration type side of the sport, you mentioned Hockey Canada, you mentioned the NHL, maybe does the NHL or hockey Canada? How about any other administrative bodies do they have a definition that you are aware of?

T: Well I know that hockey Canada does because you have to take your levels and according to hockey Canada you are not considered a high performance coach until you complete the high performance level. Now I know that in the US the levels are kind of similar, so (pause) USA hockey would be on the same level as hockey Canada and in terms of athletic directors you don't really need any certification at the NCAA level to be a head coach of a team. You need your masters degree so I guess that could be (pause) kind of (pause) something to give them to say they are high performance, but I think in terms of the NCAA with athletic directors I think it is more about credentials so I think credentials could play a lot into whether the coach is high performance or not.

N: So you have spoken a little but about identifying who they are and what you are going to look at, but getting back to the overall theme, you mentioned about looking at the pathway of former goaltenders. What do you think that looks like? Obviously you have some experience in your background with the game and from your perspective what do you think that looks like right now?

T: I think that in comparison to forwards and defensemen, I think that former goaltenders had to start at a lower level of coaching. Look at me for instance, I have had to start at a lower level and I think that former goaltenders had to start at either the midget or junior level, whereas former forwards or defensemen probably could have jumped into an assistant coaching role at the pro level right away just because they are more use to playing certain systems and obviously when you are coaching a bench of forwards and defensemen it is a lot different. You aren't just there talking to the goalie on the ice and the backup goalie on the bench. You have to deal with 6 defensemen, 12 forwards so I feel like for goaltenders they would have to start a lot lower to get used to it.

N: Okay, and how do you define lower?

T: I would think either at the minor hockey level, specifically midget which could be 15, 16, 17 or junior which could be 16 to 21. I would think that that is where they would have had to start.

N: Okay. So switching gears a little bit to you and the project. Do you anticipate any challenges? Have you thought through any potential challenges you may face?

T: I do. I feel the biggest challenge I could face is I may not be able to get in contact with some of the coaches I want to interview. So say that I want to interview some coaches who coach professionally and obviously that is a very stressful job, working 70-80 hours a week. Looking at uhh getting ready for the draft, getting ready for next season, coaching in the rookie tournaments, things like that it may be very difficult to get in contact with those people so I feel like I may not even be able to contact any former NHL coaches. It may have to be all junior coaches.

N: Okay and umm any other things you think? You have identified getting in contact at the high performance level. Anything other than just getting the coaches?

T: Another challenge could be that I am relatively inexperienced at conducting interviews myself. So let's say that I have a coach who I am interviewing and he gives me a remark that I deem rude or something I may not know how to respond to that immediately. So I feel like in order to combat this challenge I feel like I am going to have to do some pilot interviews before hand so I know how to probe appropriately, I don't ask any leading questions to throw them off. Nothing too personal that is going to annoy them and cause me to stutter when I am asking them questions.

N: Okay. Any other challenges that you have identified yet?

T: That is all so far. I am sure I will probably encounter more, but that is all I know of right now.

N: As you go through this process what do you intend on getting out of it? What do you plan on learning? What do you hope to learn?

T: I hope to learn how coaches develop, how former goaltenders evolved into head coaches you know. I would like to know let's say they moved from the major junior level the AHL level. What I want to know is did they have an opportunity to become an assistant coach at the NHL level, but they decided to be the head coach of the AHL team to get more head coaching experience. So I want to know little things like that, that will help me in my path to coaching as a high performance coach. I also want to know (pause) little things like what they did on their pathway to becoming a head coach, like attending certain courses, who did they talk to, who was their biggest influence in climbing up the ladder of coaching.

N: Okay so I hear you tying in sort of the nuts and bolts for lack of a better term of the pathway to your learning as well is there anything on a personal level anything else you hope to learn?

T: Well the main reason I am doing this research is more of a personal interest which I think is okay because a lot of people's research is sparked by their personal interest and for me learning about former goaltender's pathways into becoming head coaches is going to help me a lot along my path.

N: Cool, um, so I guess moving on from that we talked about how you are going to identify the group and what the big themes are, how are you planning on collecting the data? You mentioned a little bit about who you are going to target. I think you brought up interviewing earlier as well. What is your strategy to collect your data?

T: My strategy is to uh employ semi structured interviews and they will most likely be over the telephone just because the funding won't be there to travel to meet with all these coaches face to face. So I am hoping that once I get a sample of the coaches I am looking for I am hoping that it will kind of snowball where I could ask a coach "hey you wouldn't happen to have any contact info for this coach would you?" if he does then I will probably be able to set up another interview with another coach.

N: Okay so you are looking at interviewing and the snowball sampling to get your coaches. Is there, can you think of any other mode of collection?

T: I am also looking at archive analysis so like I said before about using the internet hockey databases I will also be using those.

N: Okay, excellent. In terms of once you have collected it do you have strategy to analyze it?

T: I haven't. I don't have a concrete strategy in terms analyzing it but I am thinking I will probably use the N-VEVO software. I don't know how to use it, but I am going to be learning how to use it.

N: Okay so that is something else that you plan to learn through this process?

T: Yes.

N: Stuff like using software in analyzing.

T: Yes.

N: So in terms of collection are you comfortable that it is an adequate procedure to gather your data?

T: Yea I think so. I don't think there is really any other way. I could say I could do a focus group, but like I said the funding isn't there to fly all these coaches in and have them sit in one room. This isn't a quantitative study so I can't just go online and you know make up some number. I need to physically talk to these people and ask them about their pathways.

N: Cool. So um I guess part of the bracketing interview process is to try to uh understand some of your own knowledge and things that you bring into the research process with you. How do you plan on monitoring your assumptions about whether it is hockey or former goaltending? It is obviously a subject you have a lot of knowledge on. How do you plan on monitoring that through the research process?

T: Well I think what I am going to do is I am going to transcribe this interview and I am going to keep it near so that when I collect the data and analyze it and I can use this and go back on and say "oh yea that is what I said, that is what I was thinking". So I feel like that is good way to monitor what I assume about these coaches. I could also use a journal, perhaps, so I could write down my thoughts at the time so I could go back to that as well.

N: Any other thoughts or things you want to share or things you want to talk about a little bit before you embark on this process?

T: No I believe that is it unless you have any further questions.

N: No not really just you know good luck and we wish you all the best on it. I am not sure if there is anything I can do to help out on it, but if there is let me know and I would be happy to help out.

T: Thank you.