The Sport Psychologist, 2006, **20**, 198-212
© 2006 Human Kinetics, Inc.

A New Theoretical Perspective for Understanding How Coaches Learn to Coach

Penny Werthner and Pierre Trudel
University of Ottawa

The purpose of this paper is to present, using Moon's (1999, 2004) generic view of learning, a new theoretical perspective in order to understand how coaches learn to coach. After presenting her main concepts, a case study of an elite Canadian coach is used to illustrate the different learning processes in three types of learning situations: mediated, unmediated, and internal. We believe this new view of how coaches learn provides a way to see coach development from the coach's perspective and helps us understand why the path to becoming a coach is often idiosyncratic. Finally, the potential of this conceptual research framework for the study of coaches' development, specifically at the elite/expert level, is discussed.

Considering the number of times it has been mentioned, anyone involved in coaching and the world of sport is aware that coaches play an important role, that coaching is complex, and, therefore, coaches need to develop a knowledge base which should include coaching knowledge and sport specific knowledge (Abraham & Collins, 1998; Cushion, Armour, & Jones, 2003; Lyle, 2002; Potrac, Brewer, Jones, Armour, & Hoff, 2000; Saury & Durand, 1998). Recently, Trudel and Gilbert (in press), in an extensive review of the literature on coaching and coach education, concluded that coaches learn to coach through two major ways. Using Sfard's (1998) metaphors on learning, the authors discussed the literature on learning how to coach through large-scale coach education programs (acquisition metaphor) and through experience (participation metaphor). Using questionnaires and/or interviews, researchers have been able to identify a number of specific events or situations (playing experience, mentoring, coaching courses, interactions with other coaches, Internet, and so on) as sources coaches use to develop coaching knowledge and sport specific knowledge (Fleurance & Cotteaux, 1999; Irwin, Hanton, & Kerwin, 2004; Jones, Armour, & Potrac, 2003, 2004; Salmela, 1995; Wright, Trudel, & Culver, in press). Considering that coaching certification is usually obtained only after successfully completing a formal coach education program, we might expect that this source of learning would be the most important; however, many of the studies cited so far have instead shown that formalized learning venues are not

The authors are with the School of Human Kinetics, Faculty of Health Sciences at the University of Ottawa, Ottawa, Ont., K1N 6N5. E-mail: werthner@uottawa.ca.

valued by coaches as much as their day-to-day learning experiences in the field. This is perhaps an understandable finding when we consider the small amount of time a coach might spend in a formalized learning environment in comparison to the number of hours she or he spends in the sporting venue, coaching and interacting with athletes, other coaches, and officials (Gilbert, Côté, & Mallett, 2006).

While the identification of coaches' learning sources is valuable, it can be argued that the investigation should not stop there. In fact, attempting to identify which sources are more important than others (Irwin et al., 2004), without looking at the coaches' learning process in these situations, may limit any initiative to provide the best learning environment for coaches. For example, at present we have difficulty explaining why there is little consensus among coaches regarding the relative importance of the sources. Some coaches believe adamantly that past athletic experience is an asset, while others indicate that it is not very important (Wright et al., in press). The mentoring process is, for many coaches, a key factor in learning how to coach well, and yet there is a danger in being limited to only one way to learn how to coach (Trudel & Gilbert, 2004). Even the process of reflection, which is often cited as a way to learn from experience, may vary from coach to coach, depending on the presence of different conditions (Gilbert & Trudel, 2005).

To investigate coaches' idiosyncratic learning profiles, that seem to prevail regarding the sources of learning, we need to develop a more individualized approach to study how coaches develop their knowledge. The purpose of this paper is to present, using Moon's (1999, 2004) generic view of learning, a new theoretical perspective in order to understand how coaches learn to coach. The paper is divided into three sections. First we present, using figures, the main components of Moon's (1999, 2004) generic view of learning, and we create three fictitious examples to better explain her concepts.[1] In the second section, we use one case study taken from a larger study with 15 Olympic Canadian coaches to explore, in depth, how Moon's (1999, 2004) learning perspective might apply to the world of elite coaching. Finally, in the third section, we will discuss the potential of this new learning perspective for further study on how coaches learned to coach, specifically at the elite level.

A Generic View of Learning

To understand Moon's (2004) generic view of learning, it is important to start with the distinction she makes between two views of looking at learning: the "building a brick wall" and the "network." From the viewpoint of building a brick wall, the instructor provides the learner with the information that begins to construct the "bricks of knowledge." It is assumed that the instructor knows how these bricks will fit the pattern of the wall and this wall or components of knowledge are thus built up. Figure 1 is a representation of this linear view of learning when applied to coach education programs.

In this "brick wall" view of learning, it is difficult to separate learning from instruction because, in this view, without instruction there is no learning. From a sport perspective, it means sport associations or organizations will mandate experts and program designers to develop courses in terms of content knowledge (the brick wall), delivery format, and assessment tools. Course conductors will then be

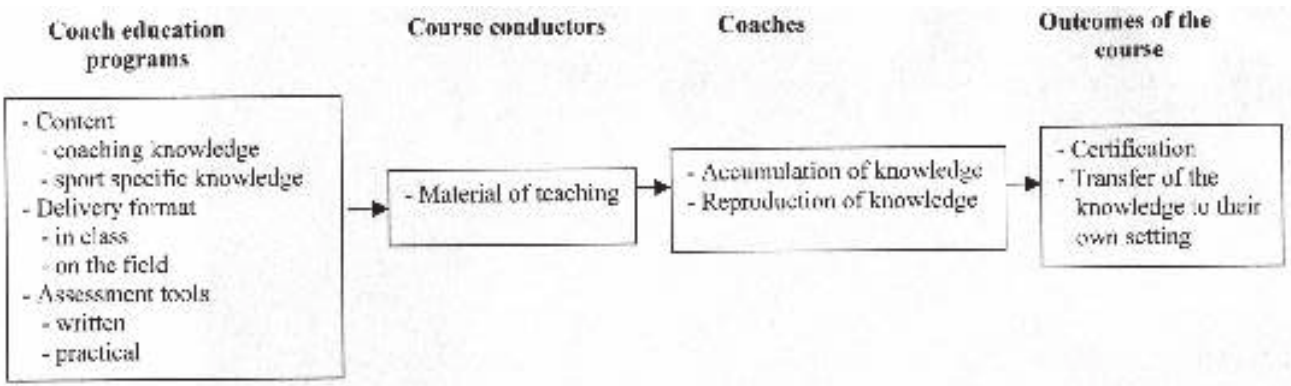

Figure 1—The metaphor of "building a brick wall" applied to coach education programs.

trained to teach the content. As far as coaches are concerned, their role is relatively passive because they are expected to accumulate specific information and reproduce it during an assessment phase (checking for any missing or incorrect bricks of knowledge). Certification will be granted to those who obtain predetermined success markers and it is assumed within the design that coaches will transfer this new knowledge to their own sport setting.

Although large-scale coach education programs, such as the Coaching Association of Canada's National Coach Certification Program, the American Sport Education Program, and the Australian National Coach Accreditation Scheme, have been in place for decades, there is no study on the effect of these programs on the coaches' behaviors or decision making before, during, or after practices or games (Gilbert & Trudel, 1999, being an exception). As a result of this situation, Cohen (1992) concluded "there are governing bodies that certify coaches based on the successful completion of our program, but we don't certify competency of coaches" (p. 25). The information gathered to judge the effect of these types of programs is often indirect. It comes mainly from interviews or questionnaires used at the end of a course to collect data on (a) the coaches' belief in their coaching ability (Malete & Feltz, 2000), (b) the coaches' use of particular psychological training skills (Gould, Hodge, Peterson, & Petlichkoff, 1987), and (c) the coaches' perceptions of the strengths and weaknesses of the course (McCullick, Belcher, & Schempp, 2005). As indicated earlier, coaches' opinions regarding the usefulness of these programs vary. One reason could be that the course was not delivered as planned (Gilbert & Trudel, 1999), but another important reason could be differences in the coaches' individual profiles (previous playing experience, expectations, beliefs, values, and so on; Cushion et al., 2003; Gilbert et al., 2006; Lemyre & Trudel, 2004; Wright et al., in press). This brings us to the second view of learning: the network.

Moon's second metaphor for learning is described as "a vast but flexible network of ideas and feelings with groups of more tightly associated linked ideas/feelings" (2004, p. 16). In such a network, learning can take place in many different ways with many diverse individuals or groups and is seen as more than just an accumulation of knowledge. It includes the kind of learning that takes place every day without the benefits and/or restrictions of an instructor. The network of knowledge, feelings, or emotions that result are called a cognitive structure and represent what the learner knows at any one particular point in time. Therefore learning should be viewed as a process of changing conceptions (the cognitive structure) and not to simply accumulate knowledge. The cognitive structure plays an important role in the learning process because it guides what we choose to pay attention to or what we choose to learn.

Figure 2 is our representation of Moon's generic view of learning applied to the coach's learning process. The coach's cognitive structure is at the center of this figure and will change and adapt under the influences of three types of learning situations. In mediated learning situations, such as formalized coaching courses, the learning is directed by another person. In unmediated learning situations, there is no instructor and the learner takes the initiative and is responsible for choosing what to learn. Finally, there are the internal learning situations, where there is a reconsideration of existing ideas in the coach's cognitive structure. Two other concepts need to be defined. The external experience refers to "the material of learning

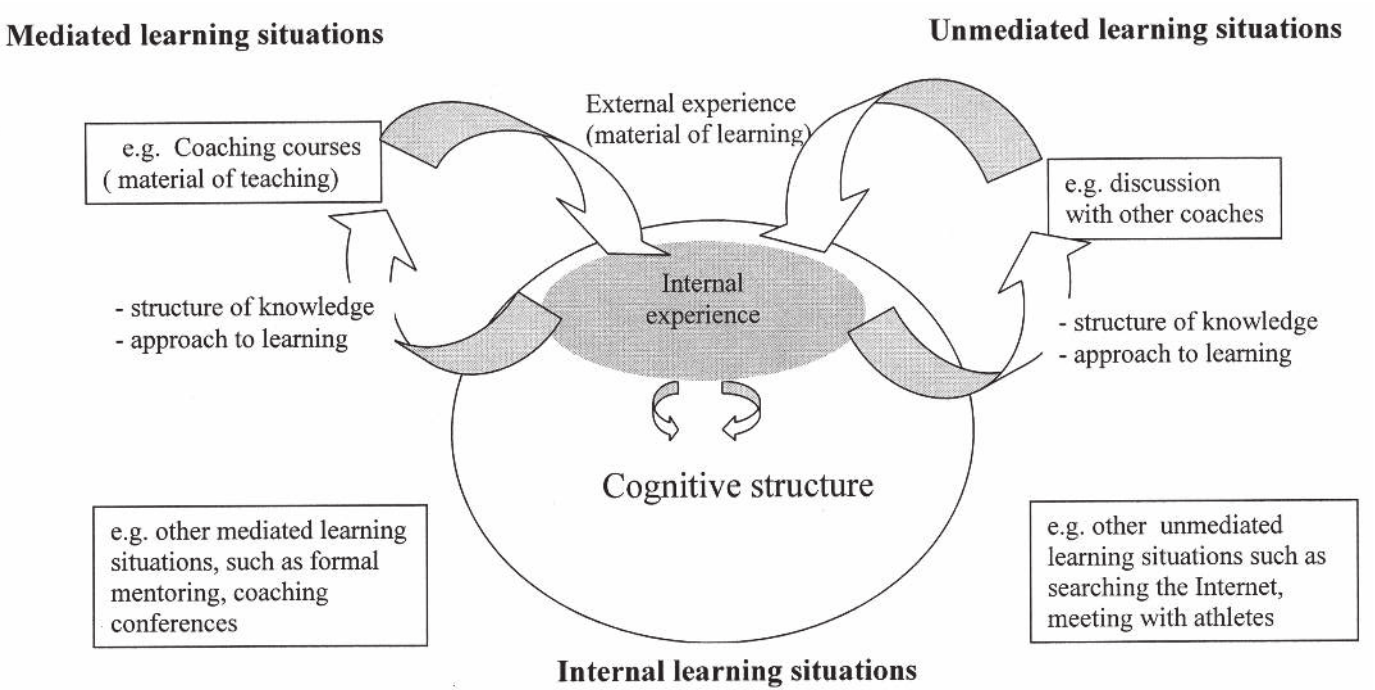

Figure 2—The metaphor of "network" applied to coaches learning in different learning situations.

when we are learning about something outside of ourselves. It is the object, idea, the concept, the image—whatever it is that the learner wants to assimilate" (p. 23). The internal experience is "the experience that the learner brings to the learning situation from her current cognitive structure" (p. 23).

The generic view of learning, as we understand Moon's work, will be further explained using three fictitious examples. The first example is an illustration of learning that takes place within a mediated learning situation, the second example illustrates learning within an unmediated learning situation, and the third example is an illustration of learning from an internal learning situation.

In our first example, two coaches, Mark and Judy, are taking a required weekend course on the topic of athlete anxiety before competition. Their coaching cognitive structures are very different. Mark, an ex-international athlete, has been a full-time elite coach for 15 years while Judy, still competing at the national level, has been coaching part time for the last 2 years. Their knowledge and feelings, specific to the topic (athlete anxiety before competition), which is referred to as their internal experience, also varies. Judy had just completed a university degree in experimental psychology while Mark had, in the past, preferred to use the services of a sport psychology consultant to deal with any aspect of sport psychology. The differences in their cognitive structures and their internal experiences will influence what both of them will pay attention to and choose to learn. Other factors could also have an impact on their learning processes. One of those factors is their conception of the structure of knowledge. Influenced by the positivist research paradigm that is predominant in the field of experimental psychology, Judy tends to view knowledge in terms of polarities (right and wrong, black and white), and she expects the course conductor to be able to provide definite answers to her questions. For Mark, coaching is a complex activity that involves solving ill-structured problems. Therefore, there usually are no right or wrong answers. The correct decisions to take will often depend on the context. A second potential factor is each coach's approach to learning. Because Mark knows very well that he can still afford the services of a sport psychology consultant to work with his athletes in the future, he will favor a surface approach regarding this learning task. His strategy will consist of memorizing the content that will most likely be on the final exam. In contrast, Judy has an interest in sport psychology and she will take a deep approach that will be characterized "by an intention in the learner to understand the material of learning, seeking the meaning and understanding the ideas in it" (Moon, 2004, p. 59).

Considering Judy and Mark's differences in terms of cognitive structure, internal experience, conception of the structure of knowledge, and approach to learning, their participation and learning in the course will be different. And, if in the weeks following the course, we ask Judy and Mark to describe their learning experience, we will probably get two different reports although they will have participated in the same mediated learning situation. Judy's feedback on the course might be that she learned a great deal and is eager to apply it in her coaching, while Mark might say that the course was of some interest but he could have spent the weekend doing other things, as he will continue to ask the team sport psychologist to monitor the situation.

In a constructivist view of learning, where there is an assumption of multiple realities, it is important to see the differences between the material of teaching (what the course conductor had presented) and the material of learning. Material

of learning refers to what Mark and Judy will use to change or adapt their own cognitive structure and more specifically, their internal experience regarding athlete anxiety. Although these differences emphasize that teaching is a separate activity from the act of learning, it does not mean that course conductors are not important. The role of an effective course conductor is to be aware of who they are teaching and how to make the material useful and challenging.

The second example is provided to illustrate the learning process in unmediated learning situations. William, a coach with 25 years of experience, considers that to be successful at the elite level, he has to continually be upgrading his knowledge. Therefore, he is regularly looking for and creating different learning opportunities for himself. In this case, it is William himself who will decide the topic to investigate and no one, such as an instructor or facilitator, will be present to influence how he should approach it. The topic of interest will probably come from a coaching issue that he is dealing with, as opposed to a topic that others have decided is important, as was the case of Mark and Judy in the first example. Therefore, unmediated learning situations should be considered an important way to learn because the meaningfulness of the material of learning is probably high. However, the potential of these unmediated learning situations is limited by a number of significant aspects—the level of coaches' ability to learn by themselves, their openness and eagerness to create new learning opportunities, and the fact that coaches cannot look for information on a topic if they do not know it exists. The importance for coaches to have access to both types of learning situations, the mediated and the unmediated, will be discussed later in this paper.

The third fictitious coaching example is provided to illustrate an internal learning situation, which refers to a learning situation where there is no new material of learning (external experience) coming from either a mediated or unmediated learning situation. This internal learning situation is represented in Figure 2 by the two arrows in the cognitive structure. For example, Helen, a coach with 15 years experience, will regularly take time to reflect on what she is presently doing. She might reflect on her technical and physical training programs, on how her athletes are currently performing, and on what might be changed from this year's training to next year's training. To be successful in this kind of internal learning situation, Helen has to be ready to question the appropriateness of her knowledge. The challenge is to bring a level of objectivity to her reflection in order to create new learning, rather than just go round in circles. The potential of the process of reflection to learn or improve one's coaching knowledge has been underlined by numerous authors (Cassidy, Jones, & Potrac, 2004; Cushion et al., 2003; Gilbert & Trudel, 2001; Strean, Senecal, Howlett, & Burgess, 1997).

For the purpose of presenting and explaining the main components of the generic view of learning, we have used three distinct though fictitious examples. In reality, a coach can be learning in a number of different learning situations at the same time, creating a very complex learning process, as new material of learning can change the cognitive structure or can be changed by the cognitive structure (Moon, 2004). Such changes will have a direct influence on the next learning situation being mediated, unmediated, or internal. We must also consider the influence of participation in many different learning situations over time. A detailed description of a coach's cognitive structure is therefore almost impossible because it is the result of a process always in movement and certainly not always conscious and intentional.

However, we believe, if we ask coaches to expand on their learning situations, it will be possible to portray the learning processes they tend to prefer.

Elite Coach Case Study

One case study, taken from a larger research project on elite Canadian coaches' sources of learning, is used to explore and illustrate, in depth, the main components of Moon's generic view of learning. Through this single case, we will identify the different learning situations that the coach makes reference to, and we will apply the main components of Moon's generic view of learning. The single coach case study was selected from among 15 in-depth interviews conducted with elite Canadian Olympic level female and male coaches. All of the coaches met the following criteria: (a) had been coaching at the national or international level for at least ten years, (b) had been an Olympic coach, and (c) at the time of interview were presently coaching athlete(s) with at least one top-ten result in the world within the last two years. In terms of selection of this single case study, any of the 15 coaches could have been chosen. We decided to choose a full time coach.

Data Collection

The primary question that guided the interviews was this: What do you feel has helped you develop as a skilled coach? To aid in the dialogue between researcher and coaches, and to effectively explore the tacit knowledge around learning for these elite coaches, several other sub-questions were prepared to aid in the discussion of learning. These sub-questions, which addressed types of learning situations, such as formal coaching courses, clinics and conferences, the process of self-reflection, dialogue and reflection with other coaches and athletes, and use of mentors were based on the review of the coaching education literature (Fleurance & Cotteaux, 1999; Gould, Giannini, Krane, & Hodge, 1990; Irwin et al., 2004; Jones, Armour, & Potrac, 2003, 2004; Lemyre & Trudel, 2004; Salmela, 1995; Wright et al., in press). The interviewer in this study possessed 20 years of experience as a sport psychology consultant with Canadian Olympic athletes and coaches and has also conducted interviews for other similar research projects. Two pilot interviews were also completed.

Interviews were transcribed verbatim, resulting in a transcript of 20-25 single space pages for each coach. Each transcript was then e-mailed to the coaches for any comments or clarifications. Based on Tesch's (1990) classification of the types of qualitative analysis, the analysis could be called event structure analysis. The researchers read each transcript carefully and identified the learning situations. For each learning situation, a description of the learning process was provided using the elements of Moon's generic view of learning. In general, the analysis was straightforward. It was mostly deductive given that the literature on coaching provided a starting list of many learning situations and the factors involved in the learning process came from Moon's (2004) generic view of learning.

For the purpose of the present article, the authors felt an individual case study approach, where the reader would clearly be able to see, in depth, one coach's learning profile within his own coaching context, was the most effective illustration of the potential usefulness of Moon's perspective of learning.

Results

This coach, whom we shall name Steven, participated in many sports as a young athlete and competed at the 1988 Seoul Olympic Games. He began his coaching career while he was still competing, and became a full-time coach after he retired as an athlete. At the time of the interview, he had been coaching for 14 years and had developed into a national-level coach, coaching athletes to medals at three Olympic Winter Games.

For Steven, his previous experience as an athlete is an important component of his cognitive structure, particularly when he started to coach:

> It has been a while since I was an athlete, but at the beginning of my coaching career, it helped me understand what the athlete was saying when they said something like, "I feel like I have lactic acid all the way through to my hair." You know that feeling. And in the beginning it did help the athletes trust me —they knew I had competed at that level as well.

The knowledge acquired outside of sport, particularly his university degree in engineering, was instrumental in the case of Steven:

> For sure my background in university has really helped. You have to be very systematic—you try something, you get results, you understand the multiple factors that might influence what you see, you analyze the results, you make a conclusion.

Steven's perspective in a mediated learning situation has little to do with the brick wall metaphor because he does not see such learning situations as simply an accumulation of knowledge. Rather, his conception of the structure of knowledge is one of openness, always taking into consideration that there is more than one way of doing things. Therefore, he is ready to consider new information and makes changes to his cognitive structure if he thinks it is appropriate.

> You need an open mind - I think that is very important. I always, in a course, say "ok," I'm going to listen to what they have to say and see if it makes sense to me—not reject it too quickly—take the time to look closely at it. And then, if it seems ok, apply it for real, and observe what happens with the athletes.

When involved in mediated learning situations, Steven tends to take a deep approach as he will try to apply what he has been taught to really understand it. For example, when he was hired as a national coach, he was required by his sport federation to take formal coaching courses. Steven felt that they were useful, and because he was coaching as he was taking the courses, "what really helped me learn was being able to apply what I was being taught in each course right away with the athletes."

Steven seems also to have learned how to coach through unmediated learning situations, particularly with the members of his team. For example, at the end of each season, he meets with his assistant coaches and athletes and what is discussed between them becomes new material of learning that he will use to change his cognitive structure.

> Then [at the end of the season] I get together with my assistant coaches . . . it takes time—we take a month to do this. You know, each year, the national office says, "take the month of April off" and I say, no way, this month is the most important month of the year. And then we meet with each athlete and we talk about the season. . . . Sometimes they have a different opinion on what happened. So then we might change the way we plan for the next season. . . . And I'm thinking now that we need to do this in the middle of the season as well.

Steven also learns through interactions with other national coaches, both from within his sport and from coaches outside his sport. In such unmediated learning situations, the approach to learning (deep or surface) will depend on the individual. Steven seems to be eager to learn and often appears to take a deep approach.

> We talk about training technique and tactics all the time when we are traveling with the team. We share really well together. In the beginning, because I had more experience (than another national coach), I was talking more, but now it's pretty equal, it's an open discussion.

Another unmediated learning situation that Steven uses to get more material of learning is the Internet. For example, he will look for medical journals to learn about weight training methods, but because the material on the Internet is only posted information, the quantity and the quality can be such that Steven might not have the adequate internal experience to find it useful.

> I sometimes look at a medical publication that is on the Web. I use it quite a lot. It is a web site that gives all the new research and publications in medicine. When I see something there that is interesting, I will think about it, and then I will probably go to my expert in the area and ask what he thinks. Then I will decide whether to actually try something or not.

Steven's desire to learn pushes him to create learning situations and these initiatives certainly show his deep approach to learning. The new material of learning from these situations will change his cognitive structure. For example, just a month prior to the interview, he decided he needed to learn more about recovery from hard training.

> We brought in an expert on recovery from Germany and a few other coaches from other sports. We all got together to discuss ways to deal with this issue. It was great. But then you have to use it. So I set up a meeting with the athletes the next week. For me, if what I hear makes sense, then I am willing to try it and see how it might help. . . . So, I go back in my memory, and if it makes sense, I say, let's do it and if we see it helps with performance—and if it does help—then we continue with it.

Finally, Steven seems to learn a lot through internal learning situations. For example, referring to the end of each competitive year, he said, "I sit down by myself to look at the season, look at the results of the athletes, and try to do an analysis of the performance, from a training program perspective. Then I get together with my assistant coaches."

We end this case with a quote that shows many of the features of Steven's learning processes.

> When one of my athletes came to me, after a fifth-place at one Olympics, and said, "I want to win a medal at the next Olympics," I sat down at my desk and said to myself, "We have to look at all the cards and decide how to provide the best program possible—What do I need to learn? Who do I need to talk with? What do I need to read? What do I need to change? How will I analyze in order to know if the change was a good one or not?" It's the love of the sport and the athletes that makes me do all this work.

Discussion

The purpose of this article was to present, using Moon's (1999, 2004) generic view of learning, a new theoretical perspective to study how coaches learn to coach. While we cannot make any generalizations based one coach's learning situations, it is possible to discuss the potential of this perspective for the study of coaches' development specifically at the elite/expert level.

To date, coaches' expertise has been looked at from different angles. Some researchers have compared expert and novice coaches (Ahlgren, Housner, & Jones, 1998; Jones, Housner, & Kornspan, 1995, 1997). Others have, through observations and/or interviews with expert coaches, documented what they do or know (Bloom, Crumpton, & Anderson, 1999; Bloom, Durand-Bush, & Salmela, 1997; Côté, Salmela, Trudel, Baria, & Russell, 1995; d'Arripe-Longueville, Fournier, & Dubois, 1998; Hardin, 2000; Potrac, Jones, & Armour, 2002; Saury & Durand, 1998). Still other researchers have identified coaches' many sources of learning (Irwin et al., 2004; Salmela, 1995). These studies have contributed to the emergence of a new conception of coach development. The traditional way to present coach education on a continuum from novice to expert is being progressively abandoned for an approach that recognizes the specificity of the different coaching contexts whether those contexts are recreational, developmental, or elite (Trudel & Gilbert, in press). Rather than continuing to search for differences between coaching contexts, it is becoming evident that it is more important to begin to understand the similarities and differences between coaches in a similar coaching context.

For example, this article has shown that coaches might take the initiative to create their own learning situations and therefore should not be perceived as only consumers of formal education programs or unplanned informal encounters. The generic view of learning also helps to illustrate the learning processes that coaches use when involved in learning situations. Previous authors have indirectly made reference to the influence of the content of a coach's current cognitive structure by suggesting, for example, that past experiences form a kind of "screen or filter through which all future expectations will pass" (Cushion et al., 2003, p.218). The present article goes further and has looked at the influence of two other factors (one's conception of the structure of knowledge and one's approach to learning). It is also important to mention the internal learning situations as a complement to the two other ways of learning (mediated learning situations and unmediated learning situations). As well, the process of reflection has been suggested as an

important learning tool for coaches (Abraham & Collins, 1998; Cassidy et al., 2004; Cushion et al., 2003; Lyle, 2002), but the understanding of what is entailed in that process needs to be expanded. Reflection should not only mean taking new material of learning from a mediated or unmediated learning situation and then mentally processing it. It can also mean working with "within." Continued investigation of the different types of reflection (Gilbert & Trudel, 2001, 2005) performed by elite coaches will be of great interest.

Finally, we can see that the debate about the relevancy of formal versus informal learning is, in a way, a false debate. Recently, some researchers have been very critical of formal coach education programs (Abraham & Collins, 1998; Cushion et al., 2003; Jones & Wallace, 2005; Saury & Durand, 1998), suggesting that "an inherent problem with this rational approach is that learning becomes decontextualized, resulting in the production of two-dimensional coaches driven by mechanistic considerations who are unable to comprehend and, as a result, adapt to the dynamic human context" (Cushion et al., 2003, p. 220). Based on our study, we tend to agree with Lyle (2002) that "education and training depends on a mix of formal and informal provision, and understanding how learning and preparation is taking place is important in analyzing practice" (p. 275-276).

Conclusion

The network view of coaches' learning processes provides a way to see coach development from the coach's perspective and can help to understand why the path to learning how to coach is often idiosyncratic. It also suggests to not limit the definition of a knowledgeable coach by the level of certification but to see coaches as potential efficient learners:

> . . . one who manages her own relationship to the variations in order to learn according to her intention. Both for learners whose learning is facilitated by a teacher and for learners working alone, central to the process of management of variation is an awareness of the state and flux between internal and external experience. (Moon, 2004, p. 29)

It is important to underline that this view does not create a polarization between knowing through mediated learning situations (e.g., formal courses) and unmediated learning situations (e.g., informal mentoring) and stresses the importance of reflection using material of learning from external experiences or from the material already within a coach's cognitive structure. However the recognition of the roles played by the three types of learning situations will impact on our traditional way of nurturing the development of coaches. Efforts should continue to develop coaching material relevant to coaches and ensure it is delivered well by skilled teachers/instructors. The facilitation of unmediated learning situations for the coaches is less obvious and yet important. Coaches, and those in charge of coaches' development, should realize that unmediated learning situations do not need to be always accidental. Coaches can search and even create these situations, and sport federations should encourage it. Regarding the process of reflection, it will not be enough to tell coaches they need to start to reflect if they want to learn. Some progressive approaches have been suggested (Gilbert & Trudel, in press).

From the perspective of sport psychologist consultants, particularly those working with elite coaches and athletes, this research on how coaches learn should be of particular interest. Coaches play an integral role in an athlete or team's performance, as well as their overall well-being. As more sport psychologist consultants work in this high performance setting, and often as part of a larger team of support staff with World and Olympic level coaches and athletes, they become involved in not just the performance of the athlete or team, but also with the performance of the coach. Developing an awareness of and understanding the many different ways coaches may learn will certainly help sport psychologist consultants in working effectively with coaches. It may influence how they choose to interact with a certain coach, as well as the direction they might direct coaches for further learning. Future studies can follow up on both the learning processes of coaches and how sport psychologist consultants can use this information to work most effectively with those coaches.

References

Abraham, A., & Collins, D. (1998). Examining and extending research in coach development. *Quest*, **50**, 59-79.

Ahlgren, R.L., Housner, L.D., & Jones, D.F. (1998). Qualitative analysis of experienced and inexperienced basketball coaches during practice. *Applied Research in Coaching and Athletics Annual*, **13**, 142-163.

Bloom, G.A., Crumpton, R., & Anderson, J.E. (1999). A systematic observation study of the teaching behaviors of an expert basketball coach. *The Sport Psychologist*, **13**, 157-170.

Bloom, G.A., Durand-Bush, N., & Salmela, J.H. (1997). Pre- and postcompetition routines of expert coaches of team sports. *The Sport Psychologist*, **11**, 127-141.

Cassidy, T., Jones, R.L., & Portac, P. (2004). *Understanding sports coaching: The social, cultural and pedagogical foundations of coaching practice*. London: Routledge.

Cohen, A. (1992, December). Standard time. *Athletic Business*, 23-28.

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.

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.

d'Arripe-Longueville, F., Fournier, J.F., & Dubois, A. (1998). The perceived effectiveness of interactions between expert French judo coaches and elite female athletes. *The Sport Psychologist*, **12**, 317-332.

Fleurance, P., & Cotteaux, V. (1999). Construction de l'expertise chez les entraineurs sportifs d'athletes de haut-niveau francais [Development of expertise in elite athletic coaches in France]. *Avante*, **5**(2), 54-68.

Gilbert, W., Côté, J., & Mallett, C. (2006). The talented coach: Developmental paths and activities of successful sport coaches. *International Journal of Sport Sciences and Coaching*, **1**(1), 69-76.

Gilbert, W., & Trudel, P. (1999). An evaluation strategy for coach education programs. *Journal of Sport Behavior*, **22**, 234-250.

Gilbert, W., & Trudel, P. (2001). Learning to coach through experience: Reflection in model youth sport coaches. *Journal of Teaching in Physical Education*, **21**, 16-34.

Gilbert, W., & Trudel, P. (2005). Learning to coach through experience: Conditions that influence reflection. *The Physical Educator*, **62**(1), 32-43.

Gilbert, W., & Trudel, P. (in press). The coach as a reflective practitioner. In R.L. Jones (Ed.), *Re-conceptualising the coaching role and how to teach it: New ways of thinking about practice*. London: Routledge.

Gould, D., Giannini, J., Krane, V., & Hodge, K. (1990). Educational needs of elite US national team Pan American and Olympic coaches. *The Sport Psychologist*, **9**, 332-344.

Gould, D., Hodge, K., Peterson, K., & Petlichkoff, L. (1987). Psychological foundations of coaching: Similarities and differences among intercollegiate wrestling coaches. *The Sport Psychologist*, **1**, 293-308.

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.

Irwin, G., Hanton, S., & Kerwin, D. (2004). Reflective practice and the origins of elite coaching knowledge. *Reflective Practice*, **5**, 425-442.

Jones, D.F., Housner, L.D., & Kornspan, A.S. (1995). A comparative analysis of expert and novice basketball coaches' practice planning. *Applied Research in Coaching and Athletics Annual*, **10**, 201-227.

Jones, D.F., Housner, L.D., & Kornspan, A.S. (1997). Interactive decision making and behavior of experienced and inexperienced basketball coaches during practice. *Journal of Teaching in Physical Education*, **16**, 454-468.

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**, 213-229.

Jones, R.L., Armour, K.M., & Potrac, P. (2004). *Sports coaching cultures: From practice to theory*. London: Routledge.

Jones, R.L., & Wallace, M. (2005). Another bad day at the training ground: Coping with ambiguity in the coaching context. *Sport Education and Society*, **10**(1), 119-134.

Lemyre, F., & Trudel, P. (2004). Le parcours d'apprentissage au rôle d'entraîneur bénévole. [The learning path of volunteer coaches] *Avante*, **10**(3), 40-55.

Lyle, J. (2002). *Sports coaching concepts: A framework for coaches' behavior*. London: Routledge.

Malete, L., & Feltz, D.L. (2000). The effect of a coaching education program on coaching efficacy. *The Sport Psychologist*, **14**, 410-417.

McCullick, B.A., Belcher, D., & Schempp, P.G. (2005). What works in coaching and sport instructor certification programs? The participants' view. *Physical Education and Sport Pedagogy*, **10**(2), 121-137.

Moon, J.A. (1999). *Reflection in learning and professional development: Theory and practice*. London: Kogan Page.

Moon, J.A. (2004). *A handbook of reflective and experiential learning: Theory and practice*. London: Routledge Falmer.

Potrac, P., Brewer, C., Jones, R.L., Armour, K.M., & Hoff, J. (2000). Toward an holistic understanding of the coaching process. *Quest*, **52**, 186-199.

Potrac, P., Jones, R.L., & Armour, K.M. (2002). It's all about getting respect: The coaching behaviors of an expert English soccer coach. *Sport, Education and Society*, **7**, 183-202.

Salmela, J. (1995). Learning from the development of expert coaches. *Coaching and Sport Science Journal*, **2**(2), 3-13.

Saury, J., & Durand, M. (1998). Practical coaching knowledge in expert coaches: On-site study of coaching in sailing. *Research Quarterly for Exercise and Sport*, **69**, 254-266.

Sfard, A. (1998). On two metaphors for learning and the dangers of choosing just one. *Educational Researcher*, **27**, 4-13.

Strean, W.B., Senecal, K.L., Howlett, S.G., & Burgess, J.M. (1997). Xs and Os and what the coach knows: Improving team strategy through critical thinking. *The Sport Psychologist*, **11**, 243-256.

Tesch, R. (1990). *Qualitative research: Analysis types and software tools*. New York; Falmer Press.

Trudel, P., & Gilbert, W. (in press). Coaching and coach education. In D. Kirk, M. O'Sullivan, & D. McDonald (Eds.), *Handbook of Physical Education*. London, UK: Sage.

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: Fourth volume ASTM STP 1446* (pp. 167-179). West Conshohoken, PA: ASTM International.

Wright, T., Trudel, P., & Culver, D. (in press). Learning how to coach: The different learning situations reported by youth ice hockey coaches. *Physical Education and Sport Pedagogy.*

Endnote

1. Jennifer Moon. Ph.D., has published five books and many articles in the area of reflective and experiential learning and educational learning programs. She has worked in education, health and professional development in higher education for most of her career. She has worked at University of Exeter and is presently at the School of Media Studies at Bournemouth University, Great Britain, as a learning researcher. Dr. Moon also works as an independent consultant in the areas of learning, teaching and assessment processes. Moon herself has explained her use of the term 'generic' view of learning as a common word, meaning general as opposed to specific. She has stated that she applies it in a broad manner, rather than in a technical sense.

Manuscript submitted: August 16, 2005
Revision received: February 22, 2006

Copyright of Sport Psychologist is the property of Human Kinetics Publishers, Inc. and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.