

CAC Coaching Research Symposium Showcases Current Investigations

By Sheila Robertson

The second Coaching Association of Canada Coaching Research Symposium was held on November 2, 2006, in Vancouver, with 99 delegates in attendance. The symposium is designed to offer delegates an annual opportunity to hear about current research on coaching and coach education, to network with Canadian researchers interested in coaching, and to strengthen the linkages among researchers and practitioners.

Eight poster presentations and 11 oral presentations covered a wide variety of topics. Also presented were reports on three projects of CAC's Coaching Research Committee (CRC), which is assisting CAC in developing a formal research program and creating a stronger link between university-based research and CAC programs and services.

The symposium reflects the high value CAC places on research as a critical tool to advance the coaching knowledge of Canada's higher level coaches, national sport organization technical experts, and sport scientists. For the country to continue its upward climb as a leading sport nation, it is essential to support leading-edge research that develops our understanding of why and how things work to the betterment of our athletes' and coaches' performances.

"CAC understands that decisions based on solid research data are stronger decisions," says Dr. Wendy Bedingfield of Acadia University, chair of the CRC. "We believe that the interplay between coaches and sport scientists will improve the quality of CAC programs.

Adds CAC Chief Executive Officer John Bales: "Through our research initiatives, CAC is fostering an attitude of continuous improvement, of searching for better ways to do things. And to measure our progress, we involve foreign experts in order to benchmark ourselves against other countries."

To share the expertise involved in the 2006 symposium, in this article CAC presents brief overviews of the presentations under three headings: Coaching Research Committee Projects, Poster Presentations, and Oral Presentations.

COACHING RESEARCH COMMITTEE PROJECTS

We are coaches

By Dr. Guylaine Demers of Laval University

Objective

"We are coaches" is a three-year campaign designed to increase the number of trained women coaches in Canada in order to provide female mentors and role models for young women

Project overview

- The campaign primarily targets young women and mothers with children involved in community level sport and strongly communicates the sense of community, reward, and FUN that can be achieved through coaching.
- In year one of the campaign, CAC partnered with the Canadian Soccer Association, Softball Canada, and Hockey Canada to pilot this initiative in seven host communities across Canada.
- Women were recruited to participate in the sports' National Coaching Certification Program (NCCP) community sport workshops and additional training and support was offered in open and friendly forums to further encourage and assist these women in becoming successful community coaches.

The project so far

- Number of communities

- seven communities have held a “women only” workshop. A total of 155 women attended those workshops.
- Major reasons to participate in the workshops
 - Women only and Free
- Needs expressed by the women in the workshops
 - To network
 - To get ideas on how to promote female sport
 - To get strategies to overcome “male dominance” in sport
 - To gain respect as female coaches
 - To know the female side of the sport (coaching, philosophy, the game)
 - To learn different tools for effective communication
 - To learn more sport skills and game strategies
 - To learn how to build an effective practice plan
- Lessons learned so far
 - Give out a pamphlet to each parent with a child registered in the sport, listing the date of workshop and what they will learn.
 - Have women Learning Facilitators.
 - Offer a workshop for teens (female).
 - Find out about where women’s tournaments are being held – this would be a huge network.
 - Provide possibility for further training to build on experience.

What’s Next?: Year Two of the Project

For the second year of the project, the goal is to offer workshops in 30 communities in the sports of soccer, softball, and hockey. The data collected so far has helped us to make adjustments to the project for the coming year. The following is a summary of the project’s components that will be maintained, changed, or added:

- a. CAC will continue to assume leadership of the project.
- b. Workshops will be advertised in a more efficient manner to increase the number of participants. Among other things, communities will receive the promotional material several weeks before the workshops in order to better advertise them.
- c. Communities will be strongly encouraged to hire women Learning Facilitators for the “women only” workshops.
- d. Participants will be able to access a resource kit through CAC’s website. The content derives from recommendations made by women who attended previous workshops. Since the kit is online, it will be possible to update it continually as more recommendations are gathered from the workshops of Year Two of the project.
- e. A guide for workshop coordinators has been created in order to ensure consistency between workshops. The guide presents all the necessary steps for the implementation of a “We are coaches” workshop. Experience from Year One served as a basis for the content of the guide.
- f. Workshops will be free of charge for participants.
- g. Awareness will be raised amongst local organizations to help interested participants find a coach position.
- h. Participants will be helped to establish a network.

- i. Support will be offered to participants who decide to take the plunge and become coaches. These include network, mentoring, and resources.
- j. Data will be collected about last year's participants to know their current situation. Are they coaches or not? Why?; Where?; At what level?; Is the experience positive or not? Why?; What needs to be added to "We are coaches" workshops to better help them become coaches?

Women in coaching: A descriptive study (ONLINE PDF *)

By Dr. Dru Marshall and Dawn Sharp of the University of Alberta and Dr. Gretchen Kerr of the University of Toronto

In Canada, female athlete participation rates have increased substantially at all levels of sport, yet literature suggests that the number of females in coaching positions has either stayed the same or declined, despite the acknowledged value of having women in coaching. The purpose of this study was to determine the number of women coaching in Canadian sport across a broad spectrum of competitive levels, including national, university, college, and provincial and Paralympic contexts. Coaching data was collected across these contexts for eight sports (athletics, basketball, ice hockey, rugby, soccer, swimming, volleyball, and wrestling). These sports were selected because they provided competitions at the provincial, university, college, Canada Summer Games (GSG), and international levels; provincial teams had a national sport organization and a sanctioned national competition, and national teams had the potential to compete at a world championship or Olympic Games. Data was also collected from 14 sports that qualified a team for either the 2004 or 2006 Paralympic Games. International data were collected from the 2004 Olympic Games and the 2006 Olympic Winter Games, university/college data from the 2004-05 seasons of Canadian Interuniversity Sport (CIS), and the Canadian Colleges Athletic Association (CCAA), and provincial data from the 2005 competitive year and the 2005 Canada Summer Games. Head coach data was collected for all levels of competition, while assistant coach data was collected at the provincial, and Paralympics level only. Data were collected from information widely available in the public domain.

In total, of the 1,564 head and assistant coaches of female athletes identified by the study, only 511 (33%) were female. Of the 809 head coaches of female team sports across different levels of competition, only 280 (35%) were female. Of the 415 coaches of individual sports, 98 (24%) were female. Fifty four per cent and 36% of assistant coaches for female team sports and individual sports, respectively, were female. While overall the numbers of females coaching females was relatively low, percentages of women coaching female athletes were higher in those contexts where gender equity hiring policies exist (for example, universities, Canada Summer Games). In conclusion, this study supports anecdotal data that suggests that a relatively low number of females are coaching. Further research is recommended to explore reasons why so few women are coaching and to identify best practices in recruiting and retaining female leaders.

** Denotes presentation slides are available on CAC's website (see below for link).*

Competition – Introduction Coach Evaluation for Canoe

By Dr. Phil Sullivan of Brock University

As part of the transition to competency-based programs, CAC is undertaking an evaluation of coaching education from the coaches' point of view. The initial research focuses on the outcomes of the Competition – Introduction program. Outcomes of interest include the coaches' perceptions of the validity and usefulness of the evaluation of the Comp-Int program. Initial data collection is focusing on Canoe-Kayak and Softball. Preliminary results suggest that the coaches strongly believe that the new evaluation program is both useful and relevant. Future research will focus on other sports and contexts of coaching.

POSTER PRESENTATIONS

Key characteristics of coaches who use sound coaching practice: Recommendations for coach education (ONLINE PDF)

By Ian Reade, Dr. Craig Hall, and Dr. Wendy Rodgers of University of Alberta

Two important findings emerged reflecting the influence of a person-level characteristic (personal competitive experience) and a context-level characteristic (team or individual sport) on coach behaviour. The higher the level of previous playing experience of the coach, the more likely they were to use the recommended coaching practices. This provides empirical evidence to support assumptions made in the literature by various authors that playing experience is an important type of experience for competitive coaches. Qualitative data from comments made by coaches strongly support the questionnaire data.

The second finding came from the coaching context. Coaches involved in coaching team sports tend to make less use of the desirable coaching behaviours than those involved in individual sports. This finding suggests that the coaching context may be an important consideration in the development of optimal operationalizations of desirable coach behaviours.

This evidence suggests that coach education should probably continue to become more sport context specific, and should be tailored to coach characteristics, particularly the level of competitive experience of the coach when an athlete.

How does Canada stack up? (ONLINE PDF)

By Dr. David Legg, Mount Royal College, and Veerle De Bosscher, Vrije Universiteit, Brussels

Many nations invest a considerable amount of time and money in hopes of enhancing national pride and glory at major international sporting events. The challenge is knowing where to make investments that garner the highest rate of return. To date there is no internationally recognized model to help sport leaders more effectively increase the sport system's efficiency. In 2002, a consortium of researchers from Belgium, the Netherlands, and the United Kingdom was created. After a framework for further study was developed, researchers from Norway, Italy, and Canada were invited to participate. This group then worked together with the goal of better understanding how sport policies could lead to sporting success (SPLISS).

A pilot study developed a classification of factors leading to international sporting success. Three levels were noted to be intertwined that included those at the micro (the athlete), meso (sports policies and politics), and macro levels (cultural context). The primary focus for this study was on the meso level, which was then further subdivided into nine pillars: financial support, an integrated approach to policy planning, participation in sport, talent identification and development, athletic and post-career support, training facilities, coaching, international competitions, and scientific research. The researchers surveyed athletes, coaches, and administrators of their national sport organizations to collect data on the nine pillars. The consortium developed a system to assess the nation's performance in international sport so that the two measures could then be correlated.

More specific conclusions will be forthcoming with a final publication due early in 2007. What will interest Canadian coaches are a better understanding of how Canada compares to the other participating nations and how coaching fits within the broader mix of factors influencing sporting success.

Coaching confidence and player attrition in youth hockey

By Dr. Phil Sullivan and Mark Brown, Brock University

The study focused on the coach as a potential agent of change of player attrition in youth sport. It has been noted that attrition in youth sport is a serious concern (Lindner, Koenraad, Johns, & David, 1991). Further, research has shown that such factors as coach education (Barnett, Smith, & Smoll, 1992), coach behaviour (Ferreira & Armstrong, 2002), and athlete satisfaction (Scanlan & Lewthwaite, 1986) are influential on this attrition. All of these factors have also been shown to be related to the construct of coaching confidence. The study explored the direct relationship between coaching confidence and the intention of youth sport athletes to return to their sport. Atom hockey was chosen as the sport of focus. Participants consisted of 17 coaches and their teams (159 players). The team was used as the level of analysis.

It was found that players' intention to return could be predicted by coaching confidence. In particular, confidence in teaching the techniques of their sport was positively related to players' intention to return, but confidence in strategy was negatively related to this intent. This suggests that coaches whose primary competence is in strategy can have a detrimental affect on atom hockey player attrition whereas those who perceive themselves as competent in teaching skills can have a positive affect on attrition. Implications from these findings can be drawn to coach education, particularly for the National Coaching Certification Program's contextualized framework of coach certification. All of the participating coaches were certified. Considering the results of this study, it could be suggested that coach education for this context of sport focuses more on coaching behaviours relevant to the teaching of sport specific skills and less on those that endorse strategy.

On the use and disuse of video in coaching (ONLINE PDF)

By Dr. Chris Bertram et al, University College of the Fraser Valley

Advances in video analysis software and techniques are providing coaches with new windows into the assessment of athletic performance. Technological gains and lowering costs are making video equipment and the accompanying analysis tools more accessible to coaches at all levels. However, current research on the effectiveness of such technologies remains inconclusive. This paper reviews the results of two experiments to assess the effectiveness of video in improving characteristics of the golf swing.

In Experiment 1, nine novice golfers performed a pre-test to determine baseline swing characteristics. The participants were then randomly assigned to one of three groups: 1) a verbal feedback (i.e. coaching) group; 2) a verbal plus video feedback group; and 3) a control group (no feedback). Following a 20-minute instructional session and a 10-minute rest, all groups were post-tested to determine if any improvement in swing characteristics had occurred. The results indicated that the group receiving only verbal feedback showed the greatest amount of improvement. The control group also showed modest gains, although not to the same extent as the verbal group. However, the verbal plus video group showed no significant improvement in performance from pre- to post-test.

Experiment 2 followed a similar methodology; however, more highly skilled performers were also incorporated into the design. The results revealed that while more highly skilled golfers showed modest improvements using video feedback, its effectiveness was still less than overwhelming. While the prevalence of video in coaching is on the rise, empirical data as to its benefits remain unclear, and further study is needed.

Empowering a coach to learn resonance and facilitate it within his team

By Bettina Callary and Dr. Natalie Durand-Bush, University of Ottawa

How athletes feel affects how they perform. Therefore, coaches should learn how their athletes want to feel to maximize their performance and well-being. Coaches' learning can be likened to a "changing of perceptions", as they learn from different sources that change their cognitive structure (Werthner & Trudel, 2006). It is possible for coaches to learn from their athletes, in particular from how they feel (Newburg, 2005).

Resonance is a process that allows individuals to feel in harmony with their environment and increase their performance and well-being as they collect data that enable them to manage how they feel physically, emotionally, cognitively, or spiritually on a daily basis. In this study, the Resonance Performance Model (Newburg, 2005) was used in conjunction with Moon's network view of learning (Werthner & Trudel, 2006) to qualitatively determine if and how a coach can learn to develop and sustain his team's (including himself) resonance process over time by participating in a resonance-based intervention mediated by a consultant. The team took part in a three phase, 20-week study. The phases consisted of: 1) observing the coach as he acted in his natural environment with his team; 2) facilitating a resonance intervention with the coach and team to enable the coach to learn the process of resonance with his team; and 3) observing from a distance as the coach attempted to facilitate this new process within the team. In addition to observations, field notes, and participant journaling, five consultation sessions and five interviews (pre- and post-intervention) helped to document the intervention process as well as the coach's learning process. Results will be shared in light of the potential development of a framework for future research or applications of resonance with coaches. This framework may provide an avenue of psychological training in coach education courses.

A description of an expert volleyball's coach communication profile and the rationale underlying specific interventions throughout a season (ONLINE PDF)

By Gino Perreault, University of Sherbrooke

This study describes an expert volleyball coach's communication profile and rationale in order to develop players' sport skills during practice throughout a full season. Previous studies showed the prevalence of specific coach behaviours: instructions, feedbacks, hustles, and questions. However, research should go beyond the knowledge of behaviours' frequency. In fact, Trudel and Gilbert (1995) suggested the study of coaches' thought process in addition to behaviours analysis. Based on the *Coaching Model* (Côté, Salmela, Trudel, Baria, & Russell, 1995) and the *Situated Action Theory* (Saury & Seve, 2004), an expert volleyball coach was systematically observed (n=13) throughout a full season using the Pedagogical Communication Observation System (SOCOP) (Desbiens, Roy, Spallanzani, Brunelle & Lacasse, 2005). Moreover, stimulated recall interviews (Tochon, 1996; Trudel, Haughian & Gilbert, 1996) (n=11) were conducted to explore the coach's rationale underlying selected interventions.

Results confirmed the prevalence of instructions, feedbacks, hustles, and questions as the most frequent coach's behaviours. Coach's interventions were influenced by the context, as shown by (a) intensive and shorter practices as the season evolved; (b) a progressive reduction of specific corrective feedbacks; and (c) an increase of jokes' ratio during a non-competitive week.

Furthermore, an analysis of coach's interviews showed that his interventions were based on multiple factors: (a) previous games performance; (b) quality of play execution in practice; (c) athlete's fatigue level; (d) intensity level; (e) athlete's profile; and (f) team leadership.

A previous study conducted in a competitive context reported similar findings regarding the nature and the number of factors underlying coach interventions (Trudel, Haughian & Gilbert, 1995). In conclusion, the reflection opportunity provided by this methodology contributes to enhanced coaching education and helps to gain an in-depth understanding of coaches' communication.

Using a multi-method research design to study communication in coaching (ONLINE PDF)

By Dr. Martin Roy, Sylvie Beaudoin, Dr. Jean-François Desbiens, Dr. Sylvain Turcotte, and Dr. Carlo Spallanzan, Faculty of Physical and Sport Education, University of Sherbrooke

This study focuses on coaches' communication towards the players in order to develop their sport skills during practice. Previous studies showed that instructions, feedback, hustles/encouragements, and questions are among coaches' most frequent communication behaviours. Those behaviours vary according to coaches' level of success, sport, and moment of the season. However, using behavioural approaches to assess coaches' practices has limits.

Jones, Housner & Kornspan (1995, p. 203) stated that "it is imperative that direct observation techniques be supplemented by methods for exploring the thought process of coaches." Based on the *Situated Action Theory* (Saury & Seve, 2004), the *Coaching Model* (Côté, Salmela, Trudel, Baria, & Russell, 1995), and the works of Trudel, Haughian, and Gilbert (1996), interviews were conducted to explore coaches' conceptions of communication and goals, team contexts, and self-assessment of their practice. In addition, stimulated recall interviews (Tochon, 1996) were conducted to explore coaches' rationale underlying selected interventions. Six coaches were systematically observed during a practice session and interviewed during the week preceding a playoff game.

Results showed that coaches conceive that communication must be clear and precise and should be used to support athletes and to rehearse previously learned skills. Coaches' goals are oriented toward team play and strategy, quality of play execution, and players' individual needs. Instructions, hustles, positive feedback, questions, explanations, and jokes are the most frequent behaviours, even though profiles vary greatly from coach to coach. Interventions are based on multiple factors, mainly players' profile, needs and performances, and coaches' goals. Results showed relations between coaches' conceptions of communication, goals, interventions, and the rationale underlying their interventions. The study confirms the prevalence of specific coaching behaviours and the variety of ways to coach effectively (Cratty, 1983). Moreover, the reflection opportunity provided by this methodology contributes to enhance coaching education and helps to gain an in-depth understanding of coaches' communication.

Who could help coaches in their development? (ONLINE PDF)

By Jean-François Ménard and Dr. Pierre Trudel, University of Ottawa

Generally speaking, sport bodies that are responsible for coaches' education have concentrated on developing programs that lead to a certification. The knowledge acquired outside these structured programs has not received as much attention. More specifically, who are the individuals who can help coaches in their development once they are certified? To answer this question, a review of literature in education and in coaching science revealed a number of different terms used to identify this "helping person": facilitator, consultant, supervisor, mentor, performance coach, etc. This communication presented (a) how the authors' review defined their "helping person"; (b) the specific roles and tasks attributed to this "helping person"; and (c) the potential influence this "helping person" might have in enhancing the coaches' development.

ORAL PRESENTATIONS

The acquisition of coaching knowledge of elite team sport coaches (ONLINE PDF)

By Adam Carter and Dr. Gordon Bloom, McGill University

To date, studies that identified how elite coaches acquired their coaching knowledge have typically focused on individuals who achieved comparable levels of excellence as athletes. While it is reasonable to suggest that most elite coaches were once elite athletes themselves, it certainly does not represent all elite coaches. Thus, the purpose of this study was to identify how coaches who have surpassed their athletic achievements acquired their coaching knowledge. Six male university team sport coaches with a combined total of 14 Coach of the Year awards participated. Each was coaching at a higher level than he had competed at as an athlete, had a winning percentage greater than .500, and had been the head coach at his current program for a minimum of five years.

The results indicated that while some differences existed with each coach's acquisition of knowledge, several common factors emerged, including mentoring, previous coaching experiences, university education, and observation of other coaches. These results suggest that it is possible to move up the coaching ladder without ever competing as an athlete at the same level. Additionally, by highlighting the key factors involved in the acquisition of knowledge for each of the six coaches, these findings can enhance the quality and standard of formal coach education and training programs in Canada.

Are the learning paths of elite Canadian coaches idiosyncratic? (ONLINE PDF)

By Dr. Penny Werthner and Dr. Pierre Trudel, University of Ottawa

The coach plays an integral role with an athlete or team in terms of performance. Knowing the complexity of that role, it is clear that each coach needs to develop a knowledge base that includes both sport specific knowledge and coaching knowledge. The growing body of research on coaching and learning has examined the sources of coaches' learning (Fleurance & Cotteaux, 1999; Irwin, Hanton, & Kerwin, 2004; Jones, Armour, & Potrac, 2003, 2004; Wright, Trudel, & Culver, in press), and, more recently, the learning processes of coaches (Trudel & Gilbert, in press; Werthner & Trudel, 2006). Werthner & Trudel (2006) presented a new theoretical perspective for understanding how coaches learn to coach, utilizing a single case study and Moon's generic view of learning (Moon 1999, 2004).

Continuing to use Moon (2004) as a framework, the present study explores the learning paths of 15 Canadian Olympic-level coaches. The findings indicate that while there was a common thread of continual inquisitiveness and on-going openness to learning, there were also very individualized paths of learning for each coach. For example, while several were clear that one of the ways they had learned to coach was from a combination of their formal university education and NCCP programs, others had limited formal education and stated that much of their learning took place 'on-the-job', sometimes influenced by their own experiences as high performance athletes and often guided by an extensive internal learning process cycle of self-reflection and reflection with others. The study examines and illustrates each coach's differing and similar learning paths and suggests ways to re-think future coach education programs.

Coaches' development through a community of practice: An example from a baseball league (ONLINE PDF)

By Dr. Diane Culver, Coaching Association of Canada, and Dr. Pierre Trudel, University of Ottawa

Theories of social learning that highlight the reciprocal nature of learning through interactions, both in general (Lave, 1988; Wenger, 1998) and in sport coaching (Gilbert & Trudel, 2001), provide a framework to study the development of coaches through informal learning situations. Culver and Trudel (2006) described how coaches could learn within their social learning system (SLS) (Wenger, 2000) through three different modes of interacting with others: Networks of Practice (NoPs), Informal Knowledge Networks (IKNs), and Communities of Practice (CoPs). Here we focus on the latter mode and present the results of a study conducted on a male baseball league (15-17 year olds). This league was selected for study because the attempts made by the league's technical director and the coaches to change and implement new ways of interacting were in line with many of the principles related to CoPs.

Interviews were conducted with the technical director, two coordinators, two supervisors, and two coaches. The findings suggest that: (a) some coaches might show resistance to the adoption of a new way of interacting with the other coaches in the league; (b) it is essential that a clear 'joint enterprise' be understood by all the actors in the league, including players and parents; (c) changes to the rules of play might be necessary to facilitate the development of a CoP; (d) a CoP cannot be developed over night; and (e) sustained strong leadership is needed to ensure maintenance of the CoP. At a time when coach educators are looking for ways to contextualise coaching education, this presentation provides an example of one attempt by people in the field to develop a coaches' CoP.

Coach mapping information project (ONLINE PDF)

By Ozzie Sawicki, *Pozitive Results*

To provide spatial mapping assessments, using computer based methodology, that enable analyses of pertinent sport data such as coaching or program resources and how they relate to the location of sport and community facilities, population statistics including age demographics, immigration data, income data, and a variety of related census information.

That is, to provide sport organizations, education agencies, clubs, and leagues the ability to spatially map and relate attribute information about a specific location.

Coaching as a formative process (ONLINE PDF)

By Dr. Emilio Landolfi, University College of the Fraser Valley

This paper examines the ethics of interpersonal relations in sport, namely those between coach and athlete, the resultant unhealthy practices often associated with the competitive experience, and what might be done to make those experiences more genuinely rewarding. An emphasis is placed on how coaches can contribute to the overall needs of athletes so that their development is inclusive of physical, mental, and social health.

A comparative analysis of Olympic coaches and their work-life balance

By Dr. Penny Werthner, University of Ottawa, Dr. Goran Kentta, Swedish School of Sport and Health Sciences, and Dr. Natalie Durand-Bush, University of Ottawa

This study's purpose was to survey Olympic coaches for their total work-life situation in terms of stress load-recovery balance at a most critical time and to gather information that can be developed into self-care skills and strategies to enhance personal well-being and coaching performance. The study surveyed national head coaches from Australia, Canada, England, New Zealand, Sweden, and the USA in relationship to their work and life leading up to and during the 2006 Olympic Winter Games and the 2006 Commonwealth Games.

The study has three parts:

- a questionnaire detailing the demographics of the coaches
- seven inventories covering such factors as emotional exhaustion, personal accomplishment, cynicism and assessing positive relations with others, environmental mastery, autonomy, relationship-based coping, and the importance of recovery, balance, and observing body signals
- four open-ended questions asking for detail of the strategies used to be at their best as coaches and as individuals.

This study enables better understanding of the effective strategies coaches are utilizing to maintain a healthy and well-balanced life and the struggles they face with those issues as they coach at the Olympic and international level.

The transfer of sport science to high performance coaching in Canada (ONLINE PDF)
By Ian Reade, Katie Spriggs, and Dr. Wendy Rodgers, University of Alberta

High performance coaches believe that sport science can be an important contributor to high performance coaching. Based upon an inductive analysis of interviews with 42 coaches of high performance athletes, a conceptual model was developed. The model includes factors such as the motivation of the coach, the network of the coach and their proximity to experts, the amount of education and experience the coach has, and the reputation they have developed as possible predictors of the ability of the coach to access and apply sport science information. Extensive further testing of the model is underway.

Long-term coach development: Phase 1, answering important questions (ONLINE PDF)
By Dr. Pierre Trudel and Dr. Penny Werthner, University of Ottawa

Canadian sport is implementing a seven-stage Long-term Athlete Development model based on the physical, mental, emotional, and cognitive development of children and adolescents. The next step to improve Canadian sport could be to develop a Long-term Coach Development (LTCD) model based on adult learning theories. A review of the literature on the science of coaching and discussions with colleagues abroad convinced us that no LTCD model exists at the present time. So far, the approach taken to develop coaches has been mainly to ask experts what they believe are the essential coaching knowledge/skills/competencies and, from their answers, to prepare teaching material that is spread over a number of courses, named levels. In other words, efforts were directed to the training and the certification of coaches.

Any LTCD model will benefit from well developed and delivered formal education programs, but informal learning needs to be considered as well. Therefore, we have to be concerned “with the planning of learning, rather than teaching” (Jarvis, et al., 1998, p. 116). Using the literature on the theory of learning and the science of coaching, as well as the characteristics of the Canadian sport system, such as coaches’ turnover and job precariousness, the authors address questions such as:

- Is a LTCD model appropriate for all types of coaches (recreational, developmental, elite)?
- What are the most appropriate theories of learning for a Canadian LTCD model?
- What will be the impact of a LTCD model on CAC’s perspective on how to develop/prepare coaches?
- What will be the impact for the coaches?
- Are new technologies such as Internet and videos miracle tools?

Round Table Workgroup

The round table workgroup identified five future research topics.

1. *Sustainability of the Canadian coaching system*
 - a. Salaried versus unsalaried coach systems; effects on athletes, sports, sport structure, perceived value, ownership, etc.
 - b. Further professionalization, including salary improvement, of the system. An examination of the economic and sociological contributions of coaches for consideration in salary setting was suggested.
 - c. How to retain coaches at the community level.
2. *LTAD*
 - d. Best practices from around the world.
 - e. Relationship of coach education to successful youth/child sport practices including health/injury factors.
3. *Replicate the Marshall/Kerr study on women in coaching at the community level.*
 - f. Why do women enter/leave coaching? What is the experience of women who enter/leave coaching?
4. *Successful coach practices*
 - g. How do coaches manage planning when schedules are imposed?
 - h. What is the impact of the new NCCP on athlete experience?
 - i. How should coach effectiveness be measured?
 - j. What is the definition of a successful community coach? Development coach? High performance coach? (What do parents, athletes, and other coaches say about successful coaches at each of these levels? What progress is made by the athletes of these coaches; how many stay in sport, how many achieve athletic success?)
5. *Values*
 - k. Describe the values of the community coach versus the competition coach; what are Canadian values for community coaching?

Most of the presentation slides are available through CAC's Petro-Canada Sport Leadership sportif 2006 web page: <http://www.coach.ca/sportleadershipsportif/2006/e/presentations/index.htm>