

CURRENT DIRECTIONS IN COACHING RESEARCH

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ABSTRACT: The purpose of this article is to provide a brief overview of some current directions in North American coaching research. Based on our review of the literature and awareness of the field, we selected coaching effectiveness and coach development as two dominant research themes for review. Although focused on North American research, evidence suggests that these trends are not exclusive to the North American context. The conceptual frameworks and research designs being used to conduct North American research on coaching effectiveness and coach development also appear to be widely adopted in coaching research around the world (Rangeon, Gilbert, & Bruner, 2011). This is not surprising given the increased global interest in the professionalization of sport coaching (Duffy et al., 2011).

KEYWORDS: Coaching behaviour; Coaching effectiveness; Coaching efficacy.

TENDENCIAS ACTUALES EN LA INVESTIGACIÓN SOBRE EL ENTRENAMIENTO

RESUMEN: El objetivo de este artículo es proporcionar una breve revisión de algunas corrientes actuales en la investigación sobre entrenamiento en Norteamérica. Basándonos en nuestra revisión de la literatura y nuestro conocimiento del área, hemos seleccionado la afectividad en el entrenamiento y el desarrollo del entrenamiento como las dos áreas principales. Aunque la atención ha estado centrada en la investigación en Norteamérica, existe evidencia que indica que estas

tendencias no son exclusivas del contexto Norteamericano. Los marcos conceptuales y los diseños de investigación que se utilizan en la investigación Norteamericana sobre la efectividad del entrenamiento también se emplean en todo el mundo (Rangeon, Gilbert, & Bruner, 2011). Esto no resulta sorprendente dado el creciente interés global en la profesionalización del entrenamiento en el deporte (Duffy et al., 2011).

PALABRAS CLAVE: Conducta del entrenamiento; Efectividad del entrenamiento; Eficacia del entrenamiento.

TENDÊNCIAS ACTUAIS NA INVESTIGAÇÃO SOBRE O COACHING

RESUMO: O objetivo deste artigo é apresentar uma breve panorâmica sobre algumas tendências atuais na investigação norte-americana sobre o coaching. Com base na nossa revisão da literatura e conhecimento do campo, selecionámos para revisão a eficácia do coaching e o desenvolvimento do treinador como dois dos temas dominantes na investigação. Embora centradas na investigação norte-americana, as evidências sugerem que essas tendências não são exclusivas do contexto norte-americano. Os enquadramentos conceptuais e os desenhos metodológicos utilizados para realizar a investigação norte-americana sobre a eficácia do coaching e o desenvolvimento do treinador também parecem ser amplamente adotados na investigação sobre o coaching noutros locais do mundo (Rangeon, Gilbert & Bruner, 2011). Isto não é surpreendente dado o crescente interesse mundial na profissionalização do coaching desportivo (Duffy et al., 2011).

PALAVRAS-CHAVE: Comportamento do treinamento; Eficácia do treinamento; Eficácia do treinamento.

The increased globalization of sport, and in turn sport coaching, has resulted in an associated increase in research on sport coaching. This research is now disseminated across dozens of academic journals and books. In their review of coaching research published in English-language journals between 1970 and 2001, Gilbert and Trudel (2004) found over 600 scientific articles published in 161 different journals. In the most recent 4-year period of that review (1998-2001) it was found that 33 coaching research papers were being pub-

lished annually. This yearly mean has now grown to at least 70 research papers based on a review of coaching science published in 2007 and 2008 (Rangeon, Gilbert, & Bruner, 2011). In the past few years new scientific journals have been created to accommodate and disseminate this expanding body of knowledge, including the International Journal of Sports Science & Coaching, International Journal of Coaching Science, Journal of Coaching Education and the forthcoming Sports Coaching Review. Furthermore, overviews of this

coaching research are increasingly being provided in coaching books (e.g., Cassidy, Jones, & Potrac, 2009; Lyle & Cushion, 2010) and a handbook of coaching research is scheduled to be released in 2012 (Potrac, Gilbert, & Dennison, 2012).

The purpose of the current article is to provide a brief overview of current directions in coaching research, with an emphasis on coaching research emanating from North America. A review of sport science databases and proceedings from scientific conferences reveals countless topics related to sport coaching that are currently under investigation in North America. For the purpose of the current review we have decided to organize the paper around what we believe are two dominant themes in coaching research today: coaching effectiveness and coach development. As opposed to summarizing individual studies in these areas, we instead provide a general overview of research trends specific to these two themes.

Overview of Research Trends in Coaching Effectiveness

Defining and recognizing coaching effectiveness has been a question underlying much of the research done on sport coaching. One of the earliest examples of research on coaching effectiveness was the pioneering behavior observation study on legendary American college basketball coach John Wooden (Gallimore & Tharp, 2004; Tharp & Gallimore, 1976). Many

researchers have since observed, interviewed, and dissected the work of sport coaches across all kinds of coaching contexts (Gilbert & Trudel, 2004; Trudel & Gilbert, 2006). Along the way there have been numerous attempts based on research in North America to organize what we've learned about coaching effectiveness into conceptual frameworks and models. Two of the most influential and often cited models are the Multidimensional Model of Coach Leadership (Chelladurai, 2007; Chelladurai & Saleh, 1980) and the Mediation Model of Coaching Behaviors (Smith & Smoll, 2007; Smoll, Smith, Curtis, & Hunt, 1978). Both models are firmly grounded in decades of research, although Chelladurai's work is based mostly on elite level coaching and Smith and Smoll's model has evolved from their line of research in youth sport coaching. Although both models continue to evolve and inform coaching research (e.g., Riemer, 2007), a recent analysis of coaching research shows that a third model may in fact be more influential in shaping current research. Based on their analysis of English-language coaching research published in 2007 and 2008, Rangeon and colleagues (2011) found that the Coaching Model (Côté, Salmela, Trudel, Baria, & Russell, 1995) was the most cited research paper during that 2-year timeframe. The Coaching Model presents a mental model of how elite gymnastics coaches organize their coaching knowledge and their work, and has since been validated in an elite team sport set-

ting (Gilbert & Trudel, 2000). Given the complexity of sport coaching and the need for research on coaching effectiveness we recommend careful review and analysis of all three models prior to initiating any study on coaching effectiveness. Regardless of which model is adopted, several themes are common across all of them: (a) a focus on athlete development as the primary goal – or outcome – of coaching effectiveness, (b) coaching effectiveness is demonstrated through overt coaching behaviors that are directly influenced by a range of antecedents, namely coaching values and beliefs, and (c) coaching effectiveness context-dependent - that is, coaching behaviors must be adapted to meet the specific needs of athletes in specific coaching contexts.

These three themes are succinctly captured in Horn's (2008) recent attempt to bring coherence to the coaching effectiveness and related literature. Using previous coaching models as a foundation, Horn created a comprehensive organizing framework referred to as the Working Model of Coaching Effectiveness. Horn identifies 10 areas of research and literature that have informed our collective understanding of coaching effectiveness. The cornerstone of the model is coaches' behavior because it "can have a significant effect on athletes' performance as well as their psychological or emotional well-being" (Horn, p. 245). Because of its significance in understanding coaching effectiveness, we now provide a brief overview of current trends in research

on coaches' behaviors.

Research on Coaches' Behaviors

Coach behavior has historically been the most researched topic in sport coaching (Gilbert & Trudel, 2004). Research on coaches' behaviors in North America can be traced back to the early 1970s, resulting in hundreds of published and unpublished studies (Trudel & Gilbert, 1995). Perhaps the most recent attempt to summarize the lessons from this large body of research in North America is Becker's (2012) analysis of over 300 research papers on coaches' behaviors. Becker found seven qualities repeatedly associated with effective coaching behaviours: positive, supportive, individualized, fair, appropriate, clear, and consistent. Taking a genuine interest in your athletes and creating meaningful interpersonal connections appears to be a key theme in the effective coaching behavior literature, and has in fact been demonstrated repeatedly in recent North American coaching research (e.g., Cumming, Smoll, Smith, & Grossbard, 2007; Fry & Gano-Overway, 2010; Vallée & Bloom, 2005). Although not focused exclusively on North American research, readers interested in learning more about research on coaches' behaviors will also find Cushion's 2010 book chapter on this topic to be extremely helpful.

Most of the research on coaches' behaviors has focused on coaches in the youth sport context, and this appears to be a continuing trend in North American coaching behaviour research.

Erickson and Gilbert (in press) recently reviewed this specific body of research on youth sport coaching behaviors. In their review they found that the vast majority of coaching behaviors can be classified as instructional in nature. They also found that there are no clear trends for the influence of coach gender on coaching behaviors. However, other variables such as type of sport, athletes' abilities coaching knowledge, coach's observations, and time of the season do appear to strongly influence coaching behaviors. It is clear from this body of research that any study on coaches' behaviors must be interpreted in the particular context in which the data are collected.

Coaching researchers for the most part appear to have retreated from the quest for a set of 'optimal' coaching behaviors and instead have accepted – and embraced – the idiosyncrasy and complexity of coaches' behaviors. Current trends point toward a focus on moving beyond simple descriptive accounts of coaches' behaviors to in-depth case studies that explain not only the profile of coaches' behaviors (what they do), but also the 'how', 'why' and 'when' of the behaviors. Research on coaches' behaviors has thus evolved from a reliance on unidimensional systematic observation methods (e.g., Coaching Behavior Assessment System: Smith, Smoll, & Hunt 1977; Arizona State University Observation Instrument: Lacy & Darst 1984) to multidimensional observation systems that better capture the complex and contex-

tualized nature of coaches' behaviors. That is, research on coaches' behaviors now is trending toward a focus on understanding dynamic coach-athlete interactions in context and over time as opposed to static coaching behaviour summaries.

One such method that has been proposed for examining coaches' behaviors from this dynamic perspective is the state space grid methodology (SSG's: Lewis, Lamey, & Douglas, 1999). To our knowledge this method has been used in at least two recent North American studies on coach-athlete interactions in youth sports (Erickson, Côté, Hollenstein, & Deakin 2011; Murphy-Mills, Vierimaa, Côté, & Deakin 2010). Erickson and colleagues (2011) found that highly patterned interactions targeted to the individual were typical of successful synchronized swimming teams. Murphy-Mills and colleagues' (2010) study also revealed patterned and predictable coach-athlete interactions in a successful disability swimming program. More research is needed in this area, in order to evaluate the consistency of these results across time and coaching contexts. The SSG method is showing promise as an innovative method for investigating the effectiveness of coaches' behaviors. This method also allows the drawing of individual profiles of coaches – or what has been referred to as 'behavioral signatures' (Smith, 2006; Smith & Smoll, 2007) – instead of collapsing results across coaches, as has historically been done in research on coaches' behaviors using traditional sys-

tematic observation systems (Erickson & Gilbert, in press).

We now turn our attention to what are often considered the primary antecedents to coaches' behaviors – their expectancies, values, beliefs and goals (Horn, 2008). Increasingly researchers are studying the factors that directly influence coaches' behaviors, with a particular emphasis on coaches' expectancies and coaching efficacy.

Research on Coaches' Expectancies and Coaching Efficacy

A four-step cycle is typically used to explain coach expectancies and how they influence coach behaviors and athlete outcomes (Horn, Lox, Labrador, 2010; Solomon, 2001a). First, the coach starts by assessing the athlete's ability based on various expectancy sources. Second, this initial assessment impacts the coach's behavior. Third, the athlete's behavior and performance reflects the coach's expectancies. Fourth, the coach's original expectancies are reinforced by witnessing the conformity between their initial assessment and the athlete's performance. Historically, research in this area started by focusing on the feedback patterns of coaches (Solomon & Buscombe, 2012). At the youth sport level, research yielded inconsistent results, with expectancy levels impacting feedback patterns in an inconsistent manner (Horn, 1984; Rejeski, Darracott, & Hutslar, 1979; Solomon, 2008a). At elite levels of sport, more precise research findings were found, with starters (more skilled athletes) receiving

more feedback than non-starters (less skilled athletes), thus potentially reinforcing their superior performance (Markland & Martinek, 1988, Solomon, 2008a; Solomon, Striegel, Eliot, Heon, Maas, & Wayda, 1996; Solomon, Wiegardt, Yusuf, Kosmitzki, Williams, & Stevens, 1996). Despite revealing interesting differential feedback patterns depending on expectancy level, the sources of expectancy had yet to be investigated. Therefore, researchers have more recently turned to the very first step of the expectancy cycle: the impression cues that influence the coaches' perceptions of athletes' ability levels.

The Solomon Expectancy Sources Scale (SESS; Solomon 2008b) was created based on an initial investigation of expectancy sources of college coaches. The questionnaire comprises 30 items divided into four factors: coachability, team player, physical ability, and maturity. Subsequent research using this instrument showed that the coachability factor is of prime importance, and that coaches with a higher win-loss ratio seem to communicate their expectations more effectively to their athletes (Becker & Solomon, 2005). North American research on coach expectancies has also examined the last two steps of the expectancy cycle: perceptual flexibility and performance predictors. Perceptual flexibility refers to the adaptability of expectations over time (Solomon & Kosmitzki, 1996). Overall, coaches seem relatively inflexible in their expectancies, which underlines the importance of first impressions (Sinclair & Vealey, 1989;

Solomon, Golden, Ciaponni, & Martin, 1998; Solomon & Kosmitzki, 1996).

Researchers have also started to investigate how expectancies from the coach impact athletes' performance (Solomon, 2001a; 2002a). The few studies on this part of the expectancy cycle seem to suggest differing expectancy sources between head coaches and assistant coaches. More research is needed to accurately identify the performance predictors used by coaches according to their role (i.e., head coach or assistant coach). In addition, coach feedback patterns have been shown to be different depending on expectancy levels in some contexts, but the exact effect of these feedback patterns on athlete performance is still not well understood.

In the same way coach expectancies correspond to coaches' perceptions of their athletes, coaching efficacy refers to coaches' perceptions of themselves. Coaching efficacy is defined as "the extent to which coaches believe they have the capacity to affect the learning and performance of their athletes" (Feltz, Chase, Moritz, & Sullivan, 1999, p. 765). Coaching efficacy can thus be seen as confidence in a particular situation. High levels of coaching efficacy appear to lead to greater effectiveness in teaching various sport skills, motivating athletes, using appropriate feedback and a higher commitment to coaching (Feltz, Short, & Sullivan 2008). This, in turn, may lead coaches to adopt a more holistic approach to athlete development (Kidman, 2005). Research on coaching efficacy has identified numerous sources

of coaching efficacy, including coaching experience, coach education, prior success, perception of athletes' skills, and social support. Future research in this area may focus on testing these sources of coaching efficacy across different coaching contexts (i.e., participation coaching for children, participation coaching for adolescents and adults, performance coaching for young adolescents, and performance coaching for older adolescents and adults).

Research on coaching efficacy has begun to investigate the effect of coaching efficacy on athletes' outcomes. In fact, coaching efficacy has been found to strongly influence athletes' efficacy, performance, and satisfaction (Feltz et al., 1999). Because the instruments used to measure coaching efficacy have been designed for team sports, little is known about coaching efficacy in individual sports. Sources of coaching efficacy should also be further investigated. Research across contexts is needed to better understand the impact of coaching efficacy on athlete outcomes (Chase & Martin, 2012).

We close this section on current trends in research on coaching effectiveness with a brief introduction to another recent influential development from North American coaching researchers – the integrated definition of coaching effectiveness and expertise (Côté & Gilbert, 2009). Coaching effectiveness is defined as "the consistent application of integrated professional, interpersonal, and intrapersonal knowledge to improve athletes' competence, confidence, con-

nection, and character in specific coaching contexts” (p.316). This definition connects the broad range of talent development and expertise literature to sport coaching and coach development research. Several follow-up papers have been written about specific components of the definition (Côté, Bruner, Erickson, Strachan, & Fraser-Thomas, 2010; Gilbert, & Côté, 2012) and the definition is emerging as an important conceptual framework in current coaching research around the world (e.g., Bennie & O’Connor, 2011; Gearity, 2011; Vella, Oades, & Crowe, 2011). It appears, then, that the integrated definition of coaching effectiveness and expertise, together with Horn’s (2008) Working Model of Coaching Effectiveness, are two key frameworks for designing and interpreting current research on coaching effectiveness. We now turn our attention in the remainder of this review to current trends in research on coach development.

Overview of Research Trends in Coach Development

Research on coaching effectiveness, within North America and across the world, certainly is providing an increasingly complete and detailed portrait of ‘quality’ sport coaching. Alongside the quest to better understand coaching effectiveness, the second major trend in North American coaching research that we’ve noticed is an increased interest in studying ‘how’ coaching effectiveness is developed. We refer to this emerging body of research as coach development

research, although it is sometimes also referred to as coach learning or coach education research. We suspect that this trend is at least in part directly influenced by global efforts to situate sport coaching as a legitimate and formal profession (Duffy et al., 2011). For example, in May 2011 the International Council for Coach Education (ICCE) announced the formation of a project group, comprising representatives from around the world, to develop a plan to guide the development and recognition of coaching qualifications on a global basis (ICCE, 2011). The plan, referred to as the International Sport Coaching Framework, specifically identifies a ‘robust model of coach development’ as the foundation for accomplishing their strategic plan. Arguably there is now a sufficient body of research on coach development to allow for the creation of a ‘robust model’.

The focus of coach development research is on understanding how coaches learn to coach. Coach learning has often been separated into three types of learning situations: formal, informal, and nonformal (Nelson, Cushion, & Potrac, 2006; Trudel & Gilbert, 2006; Trudel, Gilbert, & Werthner, 2010; Werthner & Trudel, 2006). Formal learning through certification courses, coaching clinics, and brief workshops has long been the dominant approach to coach development in North America. As a result, there is a notable, albeit limited, body of research on coach development that occurs through these formal learning situations. Several comprehen-

sive reviews of this research are now available (McCullick, Schempp, Mason, Foo, Vickers, & Connolly, 2009; Trudel & Gilbert, 2006; Trudel, et al, 2010). The line of research by Smith, Smoll and colleagues is by far the most comprehensive example of research on coach development through formal learning situations in North America.

Smith, Smoll and colleagues first began examining the impact of participation in formal learning situations on coach – and athlete – development in the late 1970s (Smith, Smoll, & Curtis, 1979). Their coach development intervention has undergone several revisions and is most recently referred to as the Mastery Approach to Coaching, or MAC, workshop (Smith & Smoll, 2007). Numerous studies across a range of youth sport settings have been conducted to measure the impact of their coaching workshop on coach development (Barnett, Smoll, & Smith, 1992; Coatsworth & Conroy 2006; Conroy & Coatsworth, 2004; Smith, Smoll, & Barnett, 1995; Smoll, Smith, Barnett, & Everett, 1993). Results typically show that athletes who play for trained coaches believe their coaches create a more positive and mastery-oriented team climate than untrained coaches. Athletes of coaches who complete the workshops also report higher levels of enjoyment and self-esteem and lower levels of anxiety. Their research has most certainly had a strong influence on all other North American coach development research. As the demand for formal coach education grows alongside the

professionalization of sport coaching (Duffy et al., 2011), we fully anticipate that the seminal work of Smoll, Smith and colleagues will continue to inform and shape research on coach development.

Although there is clearly still an interest, and need, for conducting research on coach development through formal learning situations, a more recent trend is an emphasis in North American research on examining the coach development that occurs through informal and nonformal learning situations. This emerging body of research shows that coaches learn through many different informal and nonformal situations, arguably starting first with coaches' early experiences in sport as athletes.

Research on Coach Developmental Pathways

Initial research examining the impact of coaches' early experiences on their development focused primarily on identifying distinct career development stages. This body of research consistently showed that early experience as an athlete in organized sport was a common feature among all sport coaches (Bell, 1997; Schempp, McCullick, & Mason, 2006; Schinke, Bloom, & Salmela, 1995). Career development stage models were created to explain coach development, but these models were soon brought into question as the notion of context-specific coaching effectiveness and expertise was increasingly proposed in the literature. Consequently, some researchers in

North America began to examine coach development from a life history perspective. Using a structured retrospective quantitative interview protocol, a line of research is now available demonstrating both the type and quantity of developmental activities most common to sport coaches across different coaching contexts (Erickson, Côté, & Fraser-Thomas, 2007; Gilbert, Côté, & Mallett, 2006; Gilbert, Lichtenwaldt, Gilbert, Zelezny, & Côté, 2009; Young, Jemczyk, Brophy, & Côté, 2009).

The consistent findings across these studies are that coaches accumulate thousands of hours, or dozens of sport seasons, as athletes; were above average in ability and did not specialize in only the sport they now coach; and invested hundreds of hours annually in coaching-related tasks such as training, competition, and administration but invested relatively little time in formal coach education. Another common trend across this research is the high variability in the quantity of specific developmental activities between coaches, even within the same sport and coaching context. This finding led some researchers to suggest the idea of identifying a minimum threshold experience (MTE) for each developmental activity. For example, Erikson et al. (2007) concluded that a given amount of a developmental activity was considered a MTE if it was reported by at least 75% of their sample of elite sport coaches.

Researchers have most recently started to use the data from this line of research to explore possible relation-

ships between amount of developmental activities and success as a coach. In the youth developmental sport context positive significant relationships were found between time (seasons and hours) spent as an athlete in the sport the participants now coach and measures of coaching success such as playoff appearances and team championships (Gilbert et al., 2009). In the elite sport context being a former athlete at an elite or moderate level for several years appears to be a required experience to become an elite level coach (Erikson et al., 2007; Young et al., 2009). This athletic experience needs to be complemented with extensive coaching experience, whether as a head coach or as an assistant coach, in an elite or developmental sport context. Having a mentor or being a mentor was also found to be a key developmental requirement for becoming a coach at the elite sport level. The role of mentors in coach development has long been acknowledged, but is also considered an undeveloped area of research ripe with possibilities for future research (Bloom, 2012).

The developmental profile structured interview method provides a novel approach to studying coach development and has also been used in coaching research outside of North America (Australia: Lynch & Mallett, 2006; Singapore: Koh, Mallett, & Wang, in press). Most recently, Young (2012) prepared a comprehensive review of this line of coach development research and proposed eight considerations for future research in this area. These recommen-

dations include the need to focus on group discriminability rather than description, the use of similar metrics for quantifying coach learning across studies, controlling for career length when comparing differently skilled coaching groups, employment of statistical approaches that use the full intra-individual data variability, and validation of skill indices that distinguish between expert and less-expert coaches.

In addition to the ongoing line of quantitative research on coach developmental pathways, a more interpretive qualitative approach to studying coach development has also been quite active in North America. The focus of this body of research has been not only on identifying the various types of coach developmental learning activities, but on examining the process of how coaches learn through their informal and nonformal learning experiences.

Research on Coach Learning Processes

Identification of the sources of coach learning appears to be fairly well documented now. For example, common – and preferred – sources of coach learning across multiple studies with coaches in different coaching contexts shows that coaches typically learn how to coach through coaching experience itself, attending coaching clinics, reviewing print and electronic media, observing other coaches – including mentors, and interacting with others (Erickson, Bruner, MacDonald, & Côté, 2008; Gilbert & Trudel, 2001; Gould,

Giannini, Krane, & Hodge, 1990; Lemyre, Trudel, & Durand-Bush, 2007; Wright, Trudel, & Culver, 2007). Coaching researchers have now shifted their focus to examining ‘how’ coaches learn through these various experiences, with a particular emphasis on the learning that occurs in context.

Perhaps one of the earliest attempts to study how coaches learn through in the field was Sage’s (1989) case study of a high school coach’s socialization into the coaching profession. Results of that study clearly showed the situated and socially networked nature of coaching learning. North American researchers have since conducted multiple studies designed to explore how coaches learn to coach through social learning networks. At least three different types of social learning networks have been identified: (a) Networks of Practice (NoP), (b) Informal Knowledge Networks (IKN), and (c) Communities of Practice (CoP) (Culver & Trudel, 2008). NoP’s are platforms where coaches regularly exchange information but have limited or no direct personal contact with other members of the network. The ever-increasing range of social networking tools are prime examples of NoP’s used by sport coaches to facilitate ongoing learning. IKN’s, on the other hand, are less formal and provide less consistent opportunities for knowledge sharing (e.g., random exchange with a peer). A CoP is typically described as a group of people who develop their knowledge through regular and ongoing interactions focused around a common and

shared set of problems and practices. Of the three types of social learning networks, the community of practice (CoP) approach has been studied, and written about, most often by coaching researchers in North America.

Research on CoP's and sport coach learning is still very much in the early stages of development. In 2004 Trudel and Gilbert provided a comprehensive essay on the possibility of applying the CoP framework to coach learning, which subsequently spawned a series of exploratory field studies in Canada (Culver & Trudel, 2006; Culver, Trudel, & Werthner, 2009; Galipeau & Trudel, 2005, 2006). The common finding across all of these studies is that sport stakeholders consistently report a need for and a belief in the value of using the CoP approach as a framework for ongoing learning in the field. However, no study was able to document full or sustained adoption of the CoP approach. It is clear from this research that the CoP approach, although promising, will not succeed unless there is a formal and sustained commitment of a dedicated peer leader. In order for the CoP approach to become a practical and widely-adopted learning framework, youth sport settings will require a change in everyday operating routines. Time must be allocated in these settings on a regular basis for structured, and guided, knowledge sharing.

Building off of these early studies, and comparing results to social learning research with teachers in non-sport settings, guidelines for creating and operat-

ing effective CoP's were put forth by Gilbert, Gallimore, and Trudel (2009). The authors reframed CoP's as 'learning communities' and suggested five operating guidelines: (a) Stable settings dedicated to improving instruction and learning, (b) Job-alike teams, (c) Published protocols that guide but do not prescribe, (d) Trained peer facilitators, and (e) Working on athlete learning goals until there are tangible gains in athlete learning. At least one exploratory study has now been conducted using these five guidelines as a framework to design coach learning communities (Bertram & Gilbert, 2011). Participation in learning communities appears to be important for coach learning because it provides a formal structured opportunity for focused, and persistent, efforts to frame and resolve everyday coaching problems. These situated problems of practice become the stimulus for reflection and continuous improvement (Ermeling, in press; Gallimore, Gilbert, & Nater, 2011; Gilbert & Trudel, 2001). In sum, there appears to be a growing recognition by North American coaching researchers that coach development requires the creation of social learning systems to support ongoing professional development that is context-specific and meets the learning needs of coaches (Barnson, 2010; Gilbert et al., 2009; Vargas-Tonsing, 2007).

CONCLUSION

The purpose of the current article was to provide a brief overview of some current directions in North American

coaching research. Based on our review of the literature and awareness of the field, we selected coaching effectiveness and coach development as two dominant research themes for review. There most certainly are other important and related research themes actively being pursued by coaching researchers in North America, not the least of which includes a movement to connect the positive youth development (PYD) literature to sport coaching contexts (e.g., Camiré, Forneris, Trudel, & Bernard, 2011; Côté, Bruner, Erickson, Strachan, & Fraser-Thomas, 2010; Gould & Carson, 2008; Jones, Dunn, Holt, Sullivan, & Bloom, 2011). We should also note that although the focus of the current review was on North American trends in coaching research, while preparing this article we found evidence that these trends are not exclusive to the North American context. It appears as though the conceptual frameworks and research designs being used to conduct North American research on coaching effectiveness and coach development are also widely adopted in coaching research around the world (Rangeon, Gilbert, & Bruner, 2011). This is not surprising given the increased global interest in the professionalization of sport coaching (Duffy et al., 2011). We certainly expect to see a continued expansion in coaching research and look forward to learning from the work that is conducted from coaching contexts outside of North America. We hope that this brief review of current research trends has served as a useful starting point for stim-

ulating new research studies that contribute to our collective understanding of sport coaching.

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