34

CHANGING ROLE OF COACHES ACROSS DEVELOPMENT

Clifford J. Mallett and Steven Rynne

Coaches are considered the key actors in the delivery of instruction to participants in a range of sporting contexts. In synthesizing the literature, the International Council for Coaching Excellence (ICCE) purports that the motives, aspirations, and needs of all sport participants change throughout the life span and therefore, coaches' ideologies, knowledge, and competence should reflect these varying needs (ICCE, 2013). Indeed, all forms of coaching should be valued for the potential contribution to the learning and development of sport participants throughout their life span (Mallett, 2013). The ongoing learning of coaches in all contexts is essential so that they might become more expert practitioners and better placed to deliver the potential benefits of sport engagement.

There are several classifications of sport involvement in the literature. For the purposes of this chapter we have focused on four contexts in which sport coaching work is undertaken: coaches of (a) young children, (b) emerging athletes, (c) performance athletes, and (d) high-performance athletes. On the basis of these different contexts in which coaches operate, we consider the needs of sport participants in each context to guide the discussion about the specific nature of coaching and how they learn their craft. Although we acknowledge the various roles of coaches in sport (e.g., sport teacher/instructor, assistant coaches, senior coach, master coach) for the purposes of this chapter, the coach-in-charge and the development of his/her expertise is the focus of attention in each sporting context.

It is worthwhile noting that we have also made the decision that coaches working with "diverse," "marginalized," and "special" groups may be appropriately viewed as forms of participation coaches, development coaches, performance coaches, or high-performance coaches. This is not to suggest that there are not complexities and subtleties associated with coaching disabled athletes for instance, but we also feel that it is doing those coaches and athletes somewhat

of a dis- service to position them as being separate from other coaches in a chapter that broadly considers the changing role of coaches across development. Of course, there are many more subtleties and complexities that exist in sport coaching than can be addressed here (e.g., the notion of early and late maturation sports). It is for this reason that such issues as the lack of female coaches at all levels of coaching and the dominant culture of autocratic styles in most sports are unable to attract more than a minor reference in this chapter. Despite these limitations, the aim in this chapter is to provide some account of the role of coaches of children, emerging athletes, performance athletes, and high-performance athletes through a consideration of what the context involves, the nature of the coach-athlete relationship, and how coaches develop their craft.

Role of coaches across development

Coaching children

In thinking about young children in sport we focus our attention towards what is termed a participation sport setting. Young children are introduced into organized sporting activities from about four to eight years of age, although some may commence at an earlier age. Exceptions to this notion of a participation setting for young children are those who are engaged in early specialization sports such as gymnastics and who likely engage in more deliberate practice pre- school. Many parents likely value the potential contribution of sport to the healthy and holistic development of their children, including physical, psychological, social, and emotional aspects (Trost, 2005). Highly competent coaches, who deliver these biophysical and psychosocial out- comes, are considered necessary to retain young participants in the sport pathways (Côté *et al.*, 2013).

Several developmental and pathway models chart this initial foray into sport, including Côté and colleagues' developmental model of sport participation (DMSP; Côté, 1999; Côté & Hay, 2002) and Gulbin, Croser, Morley, and Weissensteiner's (2013) foundations, talent, elite, and mastery model (FTEM). This initiation into sport is aligned with the notion of "sampling" sports and may also include some modified sports such as "Auskick" (short duration introductory program for Australian football). It is also aligned with the development of fundamental movement skills (Booth *et al.*, 1999) and Gulbin *et al.*'s (2013) F1 and F2 stages. This first stage (F1) in the FTEM model is associated with many movement experiences, which might be broadly classified as (a) locomotor and (b) manipulating objects such as bats (Gulbin *et al.*, 2013). In transitioning to the second stage (F2), young children are further engaged in fundamental motor and manipulative skills through formal and informal play activities (e.g., modified games), which is also consistent with Côté *et al.*'s sampling phase in their DMSP model. In this transition from F1 to F2 it is likely that young children access more qualified instruction either through school or community sporting clubs (Gulbin *et al.*, 2013).

Access to guided development (e.g., teacher) complements young children's free play activities (Côté, 1999; DMSP) and fosters the acquisition of fundamental motor skills (Davids *et al.*, 2008).

The development coach and child relationship

The International Council for Coaching Excellence (ICCE) has underscored the importance of having expert coaches work with children due to the inherent complexity associated with development (e.g., age-related assumptions; see Burrows, 2009) and context (ICCE, 2013). For this reason it is crucial that the child's introduction to sport is associated with the scaffolded development of fundamental motor and manipulative skills within a supportive learning environment (ICCE, 2013).

Coaches are the architects of the learning environment and therefore should take responsibility for creating an environment that fosters healthy and holistic development (Mallett, 2005, 2013). Central to the design of a supportive learning environment is the manner in which coaches interact with young children and how they explicitly attempt to deliver on the agreed learning outcomes (e.g., the four Cs of positive youth development) (Vierimaa et al., 2012). Coaches are implicit role models for young children, and they can either foster healthy development or contribute to attrition from sport at an early age (Côté & Gilbert, 2009). Coaches should deliver activities that are enjoyable, challenging, and promote perceptions of competence and belonging (Mageau & Vallerand, 2003; Wall & Côté, 2007). These outcomes can be achieved through an emphasis on (a) deliberate play activities (Côté & Fraser-Thomas, 2007) that are fun and enjoyable (Wall & Côté, 2007) to promote player engagement (frequent time on task) and subsequently develop fundamental motor and manipulative skills, and (b) coach feedback focused on self- referencing rather than normative comparisons (Fraser-Thomas & Côté, 2006) to promote internal motivation (Mageau & Vallerand, 2003). In particular, the lack of fun has been reported as a frequently cited reason for attrition from sport (Gould *et al.*, 1982; Butcher *et al.*, 2002).

Parents are also key actors in this initiation phase in sport. How they interact with coaches and children influences the quality of their athletes' sporting experience (Mallett & Rynne, 2012). To date, we do not have a clear understanding of the complex relations between all adult actors in the sporting context (Mallett & Rynne, 2012). For instance, it is considered necessary for parents to be involved in young children's sport participation; however, the nature of that involvement needs to be balanced to minimize the risk of either under- or over-involvement that might have the potential to contribute to negative sporting experiences and potential attrition (Côté, 1999).

How coaches of young children develop their competence

There is a paucity of research examining the learning and development of coaches of young

children. Often these coaches are included in larger data sets with coaches of emerging athletes (discussed in the next section). What we do know about coaches of young children is that they are (a) often untrained, with only approximately 50 per cent reporting some formal introductory coach education (Trudel & Gilbert, 2006), and (b) itinerant, usually volunteering parents, who are likely time poor, and have limited access to learning opportunities to develop their coaching skills (Trudel & Gilbert, 2006). Coaches of young children develop their craft mostly through informal learning situations to complement their own sporting experiences in how they deliver coaching (Mallett et al., 2009; Trudel & Gilbert, 2006). Those coaches who have been trained through formal coach education programs have been found to be more supportive of young children in sport compared with untrained coaches (see Smoll & Smith, 2002 for a review of coach effective- ness training studies). Nevertheless, formal coach education programs differentially contribute to the development of coaches of young children (Lemyre et al., 2007). Most coaches of young children probably rely upon their own sporting experiences to inform their practice (Trudel & Gilbert, 2006). It is suggested that coaches of young children are in need of mediated or guided training even though they are not career coaches, because of their role in fostering continued sport involvement or dropout for children. A corollary of dropout is a potential decrease in the talent pool along the pathway to high performance and likely an overall reduction in the quality of those that remain because of a lack of "late maturing" athletes (i.e., not remaining in the sport long enough to demonstrate their potential). This is a key concern in a number of developed nations where involvement in organized sport is at somewhat of a crisis point; for example, only one in three young children participate in sport in the Australian context, and participation peaks between nine and 11 years of age (Trost, 2013). A key challenge for the training of time- poor coaches of young children is the need to minimize the administrative load (e.g., marketing, health and safety, medical forms, contact details) that volunteering (and mostly parental) coaches undertake (Cronin & Armour, 2013) to comply with various regulatory bodies.

Coaching emerging athletes

In this section, and those that follow, we start to move the discussion away from participation sport settings towards a consideration of coaches and athletes involved in performance sport settings. To begin with, we discuss "emerging athletes" and "development coaches." Emerging athletes are typically receiving specialized, sport-specific training in ways that resemble the "specialization stage" of athlete development in Côté and colleagues' (Côté, 1999; Côté & Hay, 2002) DMSP and the transition from "foundation 2" to "foundation 3" in Gulbin *et al.*'s (2013) FTEM model. This is a time where a child generally starts to spend greater time in one or two sporting activities, often at the expense of other sporting pursuits or non-sporting interests (Strachan *et al.*, 2009; Trudel & Gilbert, 2006).

Despite the increased attention given to formal practices and competitions, there is still a

strong emphasis on participation and fun, suggesting a balance between the various forms of play and practice (Côté *et al.*, 2013). In sum, the activities undertaken by emerging athletes are sometimes referred to as a combination of deliberate play and deliberate practice (Côté *et al.*, 2003; Ericsson *et al.*, 1993). As part of their involvement in sports at this stage, emerging athletes are generally identified as being on some kind of performance "pathway," whereby they may be selected to representative (junior/regional/academy) squads in their sport. Importantly, this progress is often overseen by one or more designated coaches.

The development coach and emerging athlete relationship

Previous research has shown the importance of appropriately structured programs for emerging athletes, as their experiences at this stage have a large bearing on their continued engagement in sport (Fraser-Thomas *et al.*, 2008; Smoll & Smith, 2002). Indeed, development coaches have a large bearing on factors leading to drop out, such as pressure to move up skill levels too quickly, too much emphasis on winning, lack of playing time, and showing favoritism (Fraser-Thomas *et al.*, 2008). Conversely, development coaches have been shown to be important to the sustained engagement of emerging athletes through offering care and support, demonstrating excellent people skills, and possessing sound technical expertise. The research on coaches and athletes at this stage shows that it is important for development coaches to both challenge (technical and skill-oriented sessions) and support their athletes (personable, mastery approaches), as this facilitates adaptive forms of motivation and can enhance perseverance (Fraser-Thomas *et al.*, 2008; North, 2008).

Clearly, the role of the development coach requires far more than just the development of physical skills in emerging athletes. Unfortunately, many practices that are ingrained in sports seem counterproductive for long-term athlete engagement and well-being. This context is one in which arguably the greatest amount of harm can be done to athletes (physically and psychologically) by inappropriately adopting high-performance coaching and athletic models (Mallett & Rynne, 2012). Development coaches may experience internal role conflict between athlete personal development and the desire to produce winning athletes (Gilbert & Trudel, 2004); this is a delicate balancing act. Compounding these potentially competing goals is the fact that there is often little guidance regarding how best to coach at a developmental level. As such, development coaches are generally left to come to their own conclusions about how much emphasis they will place on winning and technical development compared to how much they will emphasize fun and the development of psychosocial skills (Gilbert & Trudel, 2004).

How development coaches develop competence

The educational background of development coaches tends to vary considerably. Trudel and Gilbert (2006) noted that development coaches may have some form of tertiary education (college/university). There are many development coaches, however, who have no tertiary

education to underpin their practice. Despite this, the majority of development coaches have engaged in some kind of coaching clinic or program of coach education. Most sports have a system of coach education (primarily under the banner of accreditation/certification), and learning in these contexts has been referred to as formal (because it is a program of study) and mediated (because the national body determines what is in the curriculum) (Wright *et al.*, 2007). However, coaches have raised concerns about the value and impact of such offerings (Stephenson & Jowett, 2009).

As a result, many development coaches are left to draw on their experiences as athletes (in the sport they now coach, as well as others that they played) and develop their coaching practice through learning by experience. Learning in this way has been described as informal (because it is primarily incidental, unregulated, and sometimes unintended) and unmediated (because the coach is wholly responsible for the direction and intensity of the development) (Gilbert *et al.*, 2009; Mallett *et al.*, 2009; Trudel & Gilbert, 2006; Wright *et al.*, 2007).

Performance athletes

Building upon the conceptualization of emerging athletes and development coaches in the previous section, we now move to a discussion of "performance athletes" and "performance coaches." Like emerging athletes, performance athletes typically receive specialized, sport-specific training. However, the nature of their sport engagement is more prolonged and intense such that it resembles the movement from Côté and colleagues' (Côté, 1999; Côté & Hay, 2002) "specializing stage" of sport participation to the "investment stage." Emerging athletes can also be thought of as being across the "talent" section of Gulbin *et al.*'s (2013) FTEM model (especially T2-T3). Performance athletes are generally only participating in one sport and are committed to higher levels of sport-specific training (deliberate practice, including ancillary activities like specialized gym programs), with less emphasis on deliberate play (Côté *et al.*, 2003; Ericsson *et al.*, 1993; Gulbin *et al.*, 2013).

Those often charged with the responsibility of accelerating the development of performance athletes are coaches – sometimes referred to as "performance coaches." Performance coaches and athletes generally have a very stable relationship (Lyle, 2002; Trudel & Gilbert, 2006) and in certain sports (typically individual ones) the coach that an athlete has at this stage may be his/her coach for the rest of his/her athletic career. Representative sport settings are the obvious exception where the coaches and athletes may only be together for a relatively short period, such as for a state or national championship (Lyle, 2002). The most common role for performance coaches, however, is in traditional club sport settings as the coaches in charge of the top teams (variously known as A teams or first teams, etc.).

The performance coach and performance athlete relationship

For performance athletes, the emphasis is very much on performance outcomes through systematic training and competition scheduling. As such, performance coaches assume a central role in the development of these athletes. Also, perceptions of coaching quality are closely tied to athletic outcomes for coaches at this level. Regardless of the form (individual, team, representative), the coach-athlete relationship tends to be quite intensive, with both parties being committed to their sporting endeavors. The nature of leadership and motivational style varies somewhat for performance coaches, but as with most forms of coaching, autocratic styles are often favored (with varying results) (Trudel & Gilbert, 2006).

Given the increased importance placed on "talent development" and "talent acceleration" with respect to performance athletes and performance coaches, one factor that has been shown to be important to this group is the issue of expectancy. Athletes who are expected to perform at a high level tend to perceive their coaches to be more positive, and through a variety of mechanisms tend to perform better than their low-expectancy peers (Trudel & Gilbert, 2006). Like their other coaching colleagues, performance coaches typically mention maintaining a connection with the sport they once played as the primary reason that they choose to coach. Other reasons that are often cited include working with future elite athletes and sporting staff and serving as a role model in their sport (Trudel & Gilbert, 2006).

How performance coaches develop competence

Performance coaches often have some form of tertiary education (college/university). Some performance coaches have attained graduate and doctoral degrees (Trudel & Gilbert, 2006). Virtually all performance coaches engage in formal coach education programs and clinics during their careers (formal and mediated). In part, this is a reflection of the expectations that national sporting bodies have of their performance coaches, but the reality is also that performance coaches tend to view their coaching as more than just a hobby, and they are prepared to spend time, money, and energy in developing their craft (Rynne, 2012). Many hope to extend their work to a full-time basis in the future and view professional development as a necessary part of improving their practice and employability.

Performance coaches also report a variety of informal learning situations that they access (Mallett *et al.*, 2009; Rynne *et al.*, 2010), and these likely change and increase over the course of their careers (Mallett *et al.*, in press). Indeed, performance coaches are often afforded greater opportunities for development than their development coaching counterparts. Because of their role as "feeder coaches," pushing athletes along the pathway to high-performance sport, performance coaches are also regularly granted access to high-performance coaches (generally informal learning). These experiences are highly valued by performance coaches, as they are viewed as being authentic and relevant to their current coaching practices. So just like the development coaches, performance coaches are able to draw on their time as an athlete in the sport they coach and their practical experiences. The difference for the performance coaches is

that they are also able to take advantage of a broader range of observational experiences and their direct interactions with a greater variety of coaching mentors (Wright *et al.,* 2007).

High-performance athletes

High-performance athletes are highly committed to a long-term and intensive program of preparation. This group of athletes can be considered to be firmly in the "investment stage" of Côté and colleagues' (Côté, 1999; Côté & Hay, 2002) model of sport participation. In keeping with this position, high-performance athletes span the "talent," "elite," and "mastery" sections of Gulbin *et al.*'s (2013) FTEM model (notably T4-M). As opposed to their performance athlete peers who may be able to balance full-time work and study with their sporting commitments, the increased training, recovery, and travel requirements of high-performance athletes means that they are generally only able to sustain casual work or part-time study and sometimes neither.

Several personnel support high-performance athletes and the coach to improve athlete performances. In short, these athletes are generally afforded significant support in pursuing their athletic ambitions. Those responsible for guiding the continued development of high-performance athletes and coordinating the team of support personnel are high-performance coaches. High- performance coaches are almost always employed on a full-time basis and include those coaching in national and international (Olympics, Paralympics, world championships) contexts, as well as in professional sport leagues (Trudel & Gilbert, 2006). High-performance coaches employ a series of clear performance benchmarks supported by highly sophisticated planning structures (Gulbin *et al.*, 2013; Lyle, 2002; Mallett, 2010). As with performance coaching context. It should be noted that for high-performance coaches, their prospects for continued employment (reappointment) and the performance of their athletes and teams are virtually inseparable.

The high-performance coach and high-performance athlete relationship

As alluded to above, the high-performance coach and high-performance athlete relationship is extremely intense. It is typically a long-term commitment between a stable group of actors with a high frequency and duration of engagement (the exception being concentrated, representative sport engagements, such as when athletes from professional teams join national squads for world championships or the Olympics). Given the typically full-time nature of the high-performance athletes and high-performance coaches, during the peak of their performance period they may spend more time together than with any other person (including partners, children, and friends). As such, the ideal relationship is almost always founded on trust and mutual respect.

The athlete relies upon the coach to support and guide his/her development while navigating the many tensions and challenges that exist in high-performance sport. Similarly, the coach relies upon the athlete(s) to engage with training, provide feedback, and ultimately perform to their potential. Mallett (2013) noted that because of the importance of athletic performance to future sport funding and coach employment, high-performance coaches face dilemmas that challenge their values and beliefs. This serves to direct their behavior, with some high-performance coaches moved to behave in unacceptable and inappropriate ways (examples include playing concussed athletes, engaging in emotional abuse, physically striking athletes). For this group of coaches (potentially more than any other described in this chapter) there are far more ethical and moral dimensions to their work because the stakes are so high (Rynne & Mallett, 2014).

How high-performance coaches develop competence

High-performance coaches have been shown to have a strong desire for continual learning (Trudel & Gilbert, 2006). They tend to have some form of tertiary education (college/ university) (Trudel & Gilbert, 2006). A study by Rynne, Mallett, and Tinning (2010) found that those who completed tertiary qualifications in a coaching-specific field highly valued their experiences in formal study. In particular, they valued the higher order thinking skills promoted in tertiary study and the exposure to concepts and terminology that allow them to interact more professionally with support staff in their programs (e.g., sport scientists; Mallett *et al.*, 2014) Other formal and mediated educational experiences reported by high-performance coaches include formal coach education (accreditation and certification). Unfortunately, high-performance coaches tend to be less enthusiastic about these offerings, generally reporting that they have somewhat limited impact on their high-performance coaching work.

Like the development and performance coaches, high-performance coaches also find value in a variety of informal learning situations that increase over their careers (Mallett *et al.*, 2014). Common learning sources reported include time spent as an athlete, previous coaching experience, and discussions with other coaches (Rynne *et al.*, 2010). The potential value of these sources may be enhanced in the high-performance coaching group because of the access that these coaches have to virtually all levels of the coaching pathway. There is also increasing acceptance that high-performance athletes serve as both a stimulus and source for high-performance coaches' learning. However, this aspect tends to be marginalized in empirical and anecdotal accounts of coach learning and development.

Individual and team sport variations

While we have tried to provide some general commentary regarding different categories of athletes and coaches, of course there is much variation in terms of real life practice. A key variation is with respect to the type of sport in which athletes and coaches are involved. There is a range of ways this can be conceptualized, but at the most basic of levels,

there are fundamental differences between team and individual sports. For example, training dynamics and athletic performance benchmarks are conceptualized in very different ways between team and individual sports (Lyle, 2002). Similarly, assessments of coaching practice vary between team and individual sports; individual sports permit a higher degree of assessment regarding the value-added contributions of the coach, whereas this is often lost in the group processes found in team sports. Even the specific planning and training processes tend to be different, with individualization being foundational to individual sports but somewhat problematic in team sports.

Future research

There has been a dearth of studies that examine the changing role of coaches across development; however, there seems to be increased interest in coaching research, especially in young children, emerging youth, and high-performance athletes. This area of inquiry is considered important because of the central role of coaches to the quality of the athletes' sporting experience and their subsequent continued engagement in the sporting pathways.

Given the emphasis on athlete-centered work in previous research, an obvious direction for future work would be to examine: (a) the coach as performer in the coach-athlete performance relationship; (b) coaching behaviors across different contexts (i.e., further differentiation between coaching roles); (c) the relative value of interventions that focus on quality coaching; (d) how high-performance coaches learn and develop (including greater consideration of those with elite playing backgrounds); (e) the contribution of coaches to athletic development; and (f) the dynamics of the coach-athlete performance relationship (rather than examining coaches or athletes in isolation).

Summary

In this chapter we focused on four athletic coaching contexts: (a) young children, (b) emerging athletes, (c) performance athletes, and (d) high-performance athletes. In each of the above contexts, coaches should be mindful of the needs, motives, and challenges of sport participants to guide their practice, learning, and development.

Coaches are considered central to the quality of sport participants' engagement. We reiterate the importance of valuing all forms of coaching and the differential contribution of blended formal, non-formal, and informal learning experiences to developing the craft of coaching in all contexts. We are also mindful of the inherent complexity associated with human development and its interdependence with the sporting and familial contexts that make the work of coaches challenging and problematic in delivering quality coaching.

The professionalization of the vocation of sport coaching (including the significant volunteer

cohort) necessitates the ongoing learning of coaches through guidance from knowledgeable others and self-reflection to contribute to their becoming an expert. To contribute to this professionalization of sport coaching there is significant need for high-quality research to inform the development of coach expertise. The provision of mediated learning opportunities is central to the development of coach expertise. However, it is the responsibility of coaches to exert their agency in seeking and maximizing varied learning opportunities to develop their craft and pursue the notion of becoming an expert.

References

- Booth, M. L., Okely, T., McLellan, L., Phongsavan, P., Macaskill, P., Patterson, J., Holland, B. (1999) 'Mastery of fundamental motor skills among New South Wales schools students: Prevalence and sociodemo- graphic distribution', *Journal of Science and Medicine in Sport*, 2: 93–105.
- Burrows, L. (2009) 'Developing' athletes', in, T. Cassidy, R. L. Jones, & P. Potrac (eds) Understanding sports coaching: The social, cultural, and pedagogical foundations of coaching practice, 2nd ed., London: Routledge, 85–92.
- Butcher, J., Lindner, K. J., & Johns, D. P. (2002) 'Withdrawal from competitive youth sport: A retrospective ten-year study', *Journal of Sport Behaviour*, 25(2): 145–63.
- Côté, J. (1999) 'The influence of the family in the development of talent in sport', *The Sport Psychologist*, 13: 395–417.
- Côté, J., Baker, J., & Abernethy, B. (2003) 'From play to practice: A developmental framework for the acquisition of expertise in team sports', in J. L. Starkes & K. A. Ericsson (eds) *Expert performance in sports: Advances in research on sport expertise*, South Australia: Human Kinetics, 89–114.
- Côté, J., Erickson, K., & Abernethy, B. (2013) 'Play and practice during childhood', in J. Côté & R. Lidor (eds) *Conditions of children's talent development*, Morgantown, WV: Fitness Information Technology, 9–20. Côté, J., & Fraser-Thomas, J. (2007) 'Youth involvement in sport', in P.R.E. Crocker (ed) *Introduction to sport psychology: A Canadian perspective*, Toronto: Pearson Prentice Hall, 266–94.
- Côté, J., & Gilbert, W. (2009) 'An integrative definition of coaching effectiveness and expertise', International Journal of Sports Science & Coaching, 4: 307–23.
- Côté, J., & Hay, J. (2002) 'Children's involvement in sport: A developmental perspective', in J. M. Silva & D. E. Stevens (eds) *Psychological foundations of sport*, Sydney: Allyn and Bacon, 484–502.
- Cronin, C., & Armour, K. M. (2013) 'Lived experience and community sport coaching: A phenomenological investigation', *Sport, Education and Society*. doi: 10.1080/13573322.2013.858625
- Davids, K. W., Button, C., & Bennett, S. J. (2008) *Dynamics of skill acquisition: A constraints-led approach*, Champaign, IL: Human Kinetics.
- Ericsson, K. A., Krampe, R. T., & Tesch-Römer, C. (1993) 'The role of deliberate practice in the acquisition of expert performance', *Psychological Review*, 100(3): 363–406.
- Fraser-Thomas, J., & Côté, J. (2006, September) 'Youth sports: Implementing findings and moving

forward with research', *Athletic Insight*, 8, Article 2. Online. Retrieved from http://www.athleticinsight.com/ Vol8Iss3/YouthSports.htm (accessed 1 February, 2014).

- Fraser-Thomas, J., Côté, J., & Deakin, J. (2008) 'Understanding dropout and prolonged engagement in adolescent competitive sport', *Psychology of Sport and Exercise*, 9: 645–62.
- Gilbert, W., Lichtenwaldt, L., Gilbert, J., Zelenzny, L., & Côté, J. (2009) 'Developmental profiles of successful high school coaches', International Journal of Sports Science and Coaching, 4(3): 415– 31.
- Gilbert, W., & Trudel, P. (2004) 'Role of the coach: How model youth team sport coaches frame their roles', *The Sport Psychologist*, 18: 21–43.
- Gould, D., Feltz, D., Horn, T., & Weiss, M. (1982) 'Reasons for attrition in competitive youth swimming', *Journal of Sport Behaviour*, 5: 155–65.
- Gulbin, J. P., Croser, M. J., Morley, E. J., & Weissensteiner, J. R. (2013) 'An integrated framework for the optimisation of sport and athlete development: A practitioner approach', *Journal* of Sport Sciences, 31(12): 1319–31. doi: 10.1080/02640414.2013.781661
- International Council for Coaching Excellence (ICCE), Association of Summer Olympic International Federations (ASOIF), & Leeds Metropolitan University (LMU) (2013) International sport coaching framework version 1.2, Champaign, IL: Human Kinetics.
- Lemyre, F., Trudel, P., & Durand-Bush, N. (2007) 'How youth-sport coaches learn to coach', *The Sport Psychologist*, 21: 191–209.
- Lyle, J. (2002) Sports coaching concepts: A framework for coaches' behaviour, London: Routledge.
- Mageau, G. A., & Vallerand, R. J. (2003) 'The coach-athlete relationship: A motivational model', Journal of Sport Sciences, 21: 883–904.
- Mallett, C. J. (2005) 'Self-determination theory: A case study of evidence-based coaching', *The Sport Psychologist*, 19: 417–29.
- Mallett, C.J. (2010) 'High performance coaches' careers and communities', in J. Lyle & C. Cushion (eds) *Sports coaching: Professionalism and practice*, London: Elsevier, 119–33.
- Mallett, C. J. (2013) 'Roles and responsibilities of the coach', in F. Pyke (ed) *Coaching excellence*, Champaign, IL: Human Kinetics.
- Mallett, C. J., & Rynne, S. B. (2012) Junior sports framework review Briefing paper topic: Role of adults in junior sport, prepared for the Australian Sports Commission, St Lucia, AU: UniQuest Pty Ltd.
- Mallett, C. J., Rynne, S. B., & Billett, S. (2014) Valued learning experiences of early career and experienced high performance coaches', *Physical Education and Sport Pedagogy*. DOI: 10.1080/17408989.2014.892062
- Mallett, C. J., Trudel, P., Lyle, J., & Rynne, S. B. (2009) 'Formal vs. informal coach education', International Journal of Sports Science and Coaching, 4(3): 325–34.
- North, J. (2008) 'Increasing participation in sport: The role of the coach', Leeds, UK: Sports Coach UK.
- Rynne, S. B. (2012) "Fast track" and "traditional path" coaches: Affordances, agency and social capital', *Sport, Education and Society*, 19: 1–15. doi: 10.1080/13573322.2012.670113
- Rynne, S. B., & Mallett, C. J. (2014) 'Coaches' learning and sustainability in high performance sport', *Reflec- tive Practice*, 15: 1–15. doi: 10.1080/14623943.2013.868798
- Rynne, S. B., Mallett, C. J., & Tinning, R. (2010) 'Workplace learning of high performance sports

coaches', Sport, Education and Society, 15(3): 315–30.

- Smoll, F. L., & Smith, R. E. (2002) 'Coaching behavior research and intervention in youth sports', in F. L. Smoll & R. E. Smith (eds) *Children and youth in sport: A biopsycho-social perspective*, 2nd ed., Dubuque, IA: Kendall/Hunt, 211–33.
- Stephenson, B., & Jowett, S. (2009) 'Factors that influence the development of English youth soccer coaches', International Journal of Coaching Science, 3(1): 3–16.
- Strachan, L., Côté, J., & Deakin, J. (2009) "Specializers" versus "samplers" in youth sport: Comparing experiences and outcomes', *The Sport Psychologist*, 23: 77–92.
- Trost, S. G. (2005) 'Discussion paper for the development of recommendations for children's and youth's participation in health promoting physical activity', a report prepared for the Commonwealth Department of Health and Ageing, Canberra: Australian Government.
- Trost, S. G. (2013) 'Junior sports framework review Briefing paper topic: Trends in sport and physical activity participation in Australian children and youth', prepared for the Australian Sports Commission, St Lucia, AU: UniQuest Pty Ltd.
- Trudel, P., & Gilbert, W. (2006) 'Coaching and coach education', in D. Kirk, D. Macdonald, & M. O'Sullivan (eds) *The handbook of physical education*, London: Sage, 516–39.
- Vierimaa, M., Erickson, K., Côté, J., & Gilbert, W. (2012) 'Positive youth development: A measure- ment framework for sport', International Journal of Sports Science and Coaching, 7(3): 601–14. doi: 10.1260/1747–9541.7.3.601
- Wall, M., & Côté, J. (2007) 'Developmental activities that lead to dropout and investment in sport', *Physical Education and Sport Pedagogy*, 12(1):77–87.
- Wright, T., Trudel, P., & Culver, D. M. (2007) 'Learning how to coach: The different learning situations reported by youth ice hockey coaches', *Physical Education and Sport Pedagogy*, 12(2): 127–44.