Title: Developmental pathways of Singapore’s high performance basketball coaches

Author(s): Koh Koon Teck, Clifford Mallet and John Wang Chee Keng

Source: *International Journal of Sport & Exercise Psychology, 9*(4), 338-352

Published by: Taylor & Francis (Routledge)

This document may be used for private study or research purpose only. This document or any part of it may not be duplicated and/or distributed without permission of the copyright owner.

The Singapore Copyright Act applies to the use of this document.

Copyright © 2011 Taylor & Francis (Routledge)

**DOI:** 10.1080/1612197X.2011.623466

Archived with permission of the publisher.
Developmental Pathways of Singapore’s High Performance Basketball Coaches

Koon Teck, Koh¹ ², Clifford J Mallett², & C.K.J, Wang¹

¹Motivation in Education Research Lab, Nanyang Technological University, Singapore
²The University of Queensland, St Lucia, Australia

Send all correspondence to the first author at the following address:

Koon Teck, Koh, PhD
Teaching Fellow
Motivation in Educational Research Lab, Nanyang Technological University, Singapore
Phone: (65) 6790-3714
Fax: (65) 6896-9260
E-mail: koonteck.koh@nie.edu.sg
Abstract

The purpose of this study was to examine the developmental pathways of high performance basketball coaches in Singapore. Such information is useful in providing information about appropriate training and development programmes for high performance coaches. Nine head coaches and assistant coaches from several senior and youth national basketball teams participated in structured retrospective quantitative interviews. All coaches had at least a Level 2 coaching certificate (technical), with level 3 being the highest standard attainable in Singapore. They were experienced coaches at the developmental level (i.e., school or club team) prior to their current appointment. Results are partially consistent with previous studies that: (1) most of the coaches were competitive athletes before coaching, and (2) coaches had engaged in coaching for at least ten years prior to coaching at the elite level. All participant coaches played a variety of sports in the early stages of sport participation. They also trained and prepared for structured competition from their early primary school days. Participant coaches also acknowledged the importance of informal and non-formal learning opportunities in enhancing their coaching knowledge and skills. Unique to the Singaporean context were the absence of mentoring, the structure of the sporting system, and the support for coach development through the national sporting organisation. The results are discussed in relation to coach education and coach development.

Key words: Coach Education, Coach Development, High Performance Basketball Coaches
Developmental Pathways of Singapore’s High Performance Basketball Coaches

A consistent theme found across the coaching literature is the critical role a coach plays in developing sport talent (Côté & Gilbert, 2009). Although the coach’s influence will vary across culture, sports, and stages of talent development (Salmela & Moraes, 2003), guidance from an effective coach seems essential to becoming a successful athlete. Hence, understanding the developmental profile of coaches is warranted so that necessary support could be provided in facilitating and developing more effective coaches. In this paper, we adopted Côté and Gilbert’s (2009) definition for coaching effectiveness as: “the consistent application of integrated professional, interpersonal, and intrapersonal knowledge to improve athletes’ competence, confidence, connection, and character in specific coaching contexts” (p. 316).

Recently, there have been a number of studies examining the developmental pathways and activities to becoming effective coaches at various levels (e.g., Ericsson, Côté, & Fraser-Thomas, 2007; Gilbert, Côté, & Mallett, 2006; Gilbert, Lichtenwaldt, Gilbert, Zelezny, & Côté, 2009; Young, Jemczyk, Brophy, & Côté, 2009). There are also studies showing that diverse experiences (as athletes and coaches) are central to becoming an effective coach in competitive sport (e.g., Bloom, 2007; Erickson et al., 2007; Schinke et al., 1995). Most of these research studies have used a mixed methodology (i.e., qualitative and qualitative) whereby coaches were asked to recall their past experiences (as athletes, coaches etc.) and elaborate upon how they learned their craft through structured interviews or questionnaires (e.g., Bloom, 2007; Young et al., 2009). Several linear stage-based explanations of coach development have also been proposed based on this body of work. For example, Salmela, Draper and Desjardins (1994) and Schinke, Bloom, and Salmela (1995) described stage models for hockey and basketball coaches that effectively captured their progression from athletes to coaches prior to high-performance coaching (Young et al., 2009).
Côté and colleagues demonstrated a method for analysing and reporting detailed, objective, and reliable quantitative information on individual’s developmental experiences as athletes and coaches. This method was tested in four studies with a wide range of coaches across three countries (e.g., Erickson et al., 2007; Gilbert et al., 2006; Gilbert et al., 2009), which showed consistency in the findings. Coaches in these studies accumulated thousands of hours as athletes, were above average in ability, and did not specialise in only the sport they now coach. Coaches also reported investing hundreds of hours in coaching-related tasks while investing relatively little time in formal coach training (Gilbert et al., 2009).

Erickson et al.’s study (2007) examined the sport experiences, milestones, and educational experiences associated with high performance coaches’ development. They found that experiences as athletes and early coaching in the sport the coach is coaching appear to be useful to the development of high performance sport coaches. The authors also suggested that the stages of developmental sport experiences model for high performance sport coaches might be considered a coaching equivalent to the Developmental Model of Sport Participation (DMSP; Côté, 1999; Côté & Fraser-Thomas, 2007). While there are similarities between both models in terms of initial sport experiences, the coaches in Erickson et al.’s study reported additional experiences such as leadership for team sport coaches during the competitive sport participation/introduction to coaching stage.

Mallett, Trudel, Lyle and Rynne (2009) noted that sports coaches participated in a range of learning opportunities (formal, non-formal, informal) that contributed to their development to varying degrees. ‘Formal’ learning refers to the coach education/accreditation programme (i.e., lead to award certification) where the curriculum design, delivery, content, and assessment tasks were significantly controlled. Learners in these formal situations have less control and influence over what information is and should be delivered. ‘Non-formal’ learning refers to “organised learning opportunities outside the
formal education system, which tend to be short-term, voluntary, less formal in nature, and
generally lack prerequisites” (Merriam, Caffarella, & Baumgartner, 2007, p.30). For
example, coaching clinics or workshops where expert coaches / instructors share ideas (e.g.,
drills, strategies) with participant coaches to enhance their coaching knowledge. Such
platforms provide opportunities for participants to interact with peers and as well as expert
coaches / instructors, especially on coaching matters. These non-formal learning
opportunities can be ongoing, highly varied and very extensive (Mallett et al., 2009). Lastly,
‘Informal’ learning which some refers to ‘incidental learning’, where coaches learned through
their day-to-day work. Several recent studies have highlighted the significant contributions
of informal learning experiences to coaches’ development at different coaching environments
(e.g., Lemyre, Trudel, & Durand-Bush, 2007; Mallett et al., 2009; Wright, Trudel, & Culver,
2007).

Gilbert et al. (2009) noted that while earlier studies on coach development provided
insight into types of learning; however, more longitudinal data are needed to extend our
understanding of how the developmental activities contribute to the overall developmental
process of coaches in specific coaching contexts. Furthermore, Young et al. (2009) revealed
that while similar results have been reported in Canada, the United States and Australia, the
nuances of culture and context should not be ignored. In a review of coaching science
research in Asia, Koh (2009a) reported that the coaching science and nation-wide formal
coach education programmes in Asia are in their infancy stage. He suggested that this is
probably due to a lack of governmental support as most of the Asian countries are considered
developing countries and investment in sports development might not be one of the
government’s priorities. In addition, he noted that most of the national team coaches are
hired because of their previous playing experience rather than professional qualifications.
The lack of government financial support and an appropriate system to facilitate coaches’
development might partially account for the poor performance (i.e., rankings) of Asian countries in major international championships. For example, with reference to the combined basketball world ranking for men and women in 2009, China (8th) is the only Asian country that ranked in the top ten. The remaining Asian countries fared poorly compared to their western counterparts such as the United States, Spain and Australia (FIBA, 2009).

Nevertheless, research conducted in Canada, Australia and the United States cannot be generalised to the Asian context without consideration of cultural influences including the extent of government financial support, the national sports system, and the provision or delivery of coach education programmes.

In recent years, Singapore has shown increased interest in making an impact on the world’s sporting arena. The establishment of the Sporting Culture Committee in 2006 is evidence of the commitment from the government to encourage more Singaporeans to: (a) actively participate in sports, and (b) excel in sports to bring glory to the country. To achieve these goals, the Government has invested $300 million in the Sporting Singapore Fund to finance sports development from 2005 to 2010. In order to encourage athletes to excel, the government has also implemented the Multi Million Dollar Award Program to reward medal winning athletes. Athletes from sailing, table tennis, and bowling, just to name a few, have made their mark on the world sporting map and had benefited from this scheme. In this regard, we should recognise that the coach plays a pivotal role in Singapore’s sporting success story. Hence, the developmental profile of high performance coaches should be critically examined.

Previous research (e.g., Erickson et al., 2007; Salmela, 1995) provides support that the sporting experiences and educational activities played an important role in high performance coaches’ development (e.g., the decision to take up coaching). Therefore, the present study sought to examine the developmental paths and activities of high performance basketball
coaches in Singapore. Specifically, two key research questions were addressed in the present study: (1) what experiences are useful for one to become a high-performance coach? and (2) what stages of development characterise a sample of high performance coaches in Singapore? Moreover, the demographic data provide useful information to understand coach development in this sample of coaches and identify current limitations in coach education and development.

Method

Participants

Nine coaches from the six national basketball teams, including the senior squads, Under-18 squads, and Under-16 squads, for both men’s and women’s teams (7 Men; $M = 42.0$ years, $SD = 8.8$) participated in this study. Of the nine participants, six were holding head coach positions. In terms of coaching qualifications, all national coaches were at least Level 2 coaching certified (technical), with Level 3 being the highest standard in Singapore. All participants were experienced coaches at the developmental level (i.e., school or club team) prior to their current appointment ($M = 13.0$ years). Among the nine coaches interviewed, the most senior coach had 23 years of experience working with elite players. The youngest assistant coach, who has just retired from the national squad as a player, had three years of coaching experience at this level. All the participants were recruited through the Basketball Association of Singapore and they voluntarily agreed to participate in this study.

Measures

An interview guide, developed by Gilbert et al. (2006), with three separate sections of questions was used specifically for the present study. The interview procedure is retrospective and quantitative in nature. The first section of the interview guide collected demographic information, level of education, coaching certification, and membership in
coaching-related organisation. The second section collected data on participants’ previous experiences as athletes (e.g., sports they participated in; years of commencing and finishing each sport; number of seasons participated at various level of competitions such as recreational, developmental and elite; sport leadership roles). The last section of the interview guide focused on collecting participants’ coaching experience. Participants were asked to provide information on the sports that they have coached, years of commencing and finishing for each sport, number of seasons coached, their coaching role (head coach or assistant coach), age and gender of athletes coached, level of competition (e.g., recreational, developmental or elite), number of competitions per season etc. The three sections of the interview guide are distinct but interrelated. The information gathered from the three sections represents the coaching process as conceptualised in the Coaching Model (Côté, Salmela, Trudel, Baria, & Russell, 1995). The interview questions were based on principles of reliable and valid retrospective data collection outlined by Côté, Ericsson and Law (2005).

Data Collection

After receiving University ethical clearance for the study, the first author contacted the participants via e-mail or telephone and briefed the participants on the purpose of this study and their possible involvement. Interviews were conducted at a place that was convenient to each participant. Total time taken to conduct an interview was between 90 and 120 minutes. All participants gave approval for the researcher to audio-tape all verbal communication for future data analysis.

The retrospective interview procedure outlined by Gilbert et al. (2006) was used to collect quantitative information from coaches that could potentially be verified using external sources, specifically to each developmental activity. Only objective, quantifiable and potential verifiable data were collected. Data were gathered in the simplest units possible to make the recall as easy, objective and straightforward as possible (Erickson et al., 2007).
For example, to determine total number of games played/coached for each team or level, participants were only required to recall the number of seasons played/coached for each team/level.

Data analysis

Data related to experiences prior to becoming high performance basketball head coaches and assistant coaches were selected for data analysis. Specifically, only those deemed representative of separate, discrete experiences were chosen and redundant items were ignored (Erickson et al., 2007), resulting in a total of 12 and 9 items for athletic and coaching experiences respectively.

For the athletic experiences, the total number of years played at various levels and the starting age for that particular level were identified. In terms of assigned leadership roles such as captain or vice captain, participants were asked to report the highest position held at each level of participation. If a coach recalled no prior experience at a particular level or sport, they were instructed to report a “0” for both columns. In addition, participants were asked to indicate the highest self-ratings of ability out of a 10-point rating scale for each level of participation (Erickson et al., 2007).

Minimum scores, maximum scores, means and standard deviations were calculated for each item. In addition, coaching position (i.e., head coach and assistant coach) held at each level was identified and analysed. Coaches were also asked to report the total number of hours spent in professional development such as coaching-related training (e.g., clinics, workshop or coaching courses). The number of mentor(s) that they have worked with throughout their coaching career was also recorded and analysed.

Results
The results for the present study are organised and presented in four parts. They are:
(a) the coaches’ profile, (b) sporting experiences, (c) coaching experiences, and (d) stages of development.

**Coaches’ Profile**

The summary of coaches’ biographical data is presented in Table 1. The results of the present study showed that about 44% of the participant coaches had completed tertiary education (with at least a bachelor’s degree), while 22% had completed a Diploma certificate.

In terms of coaching qualifications, 67% of the participant coaches possessed a Level 2 (Technical) certification while 33% of the remaining participants had a Level 3 certification, which is the highest level in Singapore. One participant did not coach at the recreational level, while the rest of the coaches had coached at this level from one to four years ($M = 2.0$, $SD = 1.0$). All participant coaches had also coached at the developmental level (school or club team) from 8 to 35 years ($M = 19.4$, $SD = 11.4$) and at the elite level from 3 to 10 years ($M = 5.1$, $SD = 2.4$).

**Sporting Experiences**

Descriptive statistics for athletic experience items are presented in Table 2. All participating high performance basketball coaches had some form of sport developmental experience prior to becoming a high performance coach. These included playing experiences at various levels and holding leadership positions within teams.

All coaches played at the recreational level ranging from two to eight years ($M = 3.9$ years, $SD = 1.0$). Eight of the nine coaches participated in a second sport at the developmental level before they specialised in basketball ($M = 3.4$ years, $SD = 3.5$). One
participant coach represented his school at the developmental level for a third sport during his secondary school days.

Results of the present study also show that all the participants represented their schools or clubs and competed in structured/organised competitions at the developmental level in basketball. During this developmental period, they rated themselves as highly capable athletes ($M = 8.3$ out of possible of 10, $SD = 1.3$). Almost half of the participant coaches were given leadership roles such as captain or vice captain at some stage in their sport participation. All coaches had most of their sporting experiences at the developmental level ($M = 15.0$ years, $SD = 8.2$), followed by the recreational level ($M = 3.9$ years, $SD = 2.0$) and the high performance level ($M = 7.4$ years, $SD = 4.4$). Furthermore, of the nine participant coaches in this study, two of them did not have any experience at the elite level.

**Coaching Experiences**

A summary of the participants’ coaching experiences in basketball is presented in Table 3. All participant coaches reported more extensive time coaching basketball at the developmental level ($M = 19.4$ years, $SD = 11.4$) ranging from 8 to 35 years, compared to the recreational and or elite level. Two out of nine participants were assistant coaches at the developmental level, and five out of nine coaches were assistant coaches at the elite level before they were appointed as the head coach. The starting age for participant coaches coaching at the high performance level ranged from 26 to 49 years old ($M = 33.2$ years, $SD = 7.2$). In terms of training hours such as attending formal coach education courses, five participant coaches reported between 70 to 800 hours per year ($M = 110.0$ hours / annum, $SD$
The remaining four coaches did not report having any forms of formal training in coaching.

Generally, coach training courses were arranged by the association (BAS) for its full-time coaching staff as part of the professional development to improve coaching practices. In addition, some part-time coaches were also given sponsorships by BAS (average one coach per year) to attend coaching courses arranged by the association. Three of the nine coaches from the present study were provided formal learning opportunities by the association. In contrast, other coaches independently sourced appropriate coaching courses and paid for all expenses, reflecting self-motivation for continuing professional development. Taken together, the total training hours in formal coach education for full-time staff and part-time coaches sponsored by BAS was higher than other coaches involved in the present study.

Stages of Development

Based on the results in this study, high performance coach development was generally classified into five stages (refer to Figure 1).

The first stage refers to early sport participation when athletes took part in non-competitive sports, especially when they were at the primary school between the ages of 8 and 12 years ($M = 10.8$ years, $SD = 1.8$). During this stage, most of them took part in at least two sports. Nevertheless, it was noted that four of the nine coaches in the present study were
also involved in competitive sport participation (2 Categories: 13 years old and below, 11 years old and below) organised by the Singapore Primary Schools Sports Council.

The second stage refers to competitive sport participation where structured training and competitions were organised, which is typically between 13 and 18 years of age ($M = 14.3$ years, $SD = 1.4$). This was the period during which participants represented their secondary schools in inter-school competitions organised by the Singapore Schools Sports Council. In addition, some participants had represented their basketball clubs and competed in competitions organised by the National Sport Association (NSA). Four of the nine coaches represented their schools and competed in a second sport at the inter-school level. It was also noted that most of the participants were given leadership opportunities (i.e., captain, vice captain) during this period of participation.

The third stage was the highest level of competitive participation where athletes represented their country for competitions. The average age for initial elite participation was 19.3 years, and the average number of years of participation at this level was 7.0 years. Seven of the nine participants interviewed had competitive experience at the elite level. It was during this stage that most coaches first gained their initial coaching experience. Seven of the nine coaches also coached their club teams during this stage of development.

The fourth stage referred to part-time coaching. Eight of the nine coaches had experienced coaching at the recreational level ($M = 2.0$, $SD = 1.0$). The average age of coaches at this level was 22.7 years ($Range = 18 – 28$ years). It was noted that most participant coaches spent more time coaching at the developmental level than other levels. The number of years coaching at this level ranged from 8 to 35 years ($M = 19.4$ years, $SD = 11.4$). Seven of the nine coaches started part-time coaching position in schools. They were given coaching allowances (remuneration) on an hourly basis, except for two of them who were teacher-coaches at their own schools. Only one coach reported having interaction with
mentor during this stage and some started attending formal coach education training (e.g.,
clinics and courses) during this period.

The fifth stage associated with high performance coaching work. The starting age
coaching at this level ranged from 26 to 49 years ($M = 33.2$ years, $SD = 7.2$) and the number
of years coaching at this level ranged from three to ten years ($M = 5.1$ years, $SD = 2.4$).
These high performance coaching positions were usually full-time positions offered by the
Basketball Association of Singapore (BAS).

**Discussion**

The purpose of this study was to gather demographic information and the athletic and
coaching experiences of the high performance basketball coaches so as to identify their
pathways to high performance coaching in Singapore basketball. By developing an
understanding of the participant coaches’ sporting and coaching experiences, we might be
able to design specific programmes and/or coaching courses to aid their professional
development and, in turn, improve the quality of coaching work. In addition, understanding
the range of learning opportunities and their contribution to coaches’ development may
provide useful information to inform policies and sport organisations in facilitating high
performance coaches’ development. Findings of high performance basketball coaches’
sporting and coaching experiences, as well as coach education/learning in Singapore, will be
discussed with reference to previous stage-based models of coach development, and related
studies on coach education/learning found in the literature (e.g., Côté, Baker, & Abernethy,
2007; Côté & Gilbert, 2009; Erickson et al., 2007; Gilbert et al., 2009; Mallett et al., 2009;
Young et al., 2009).

**Developmental Sport Experiences**

The profile of Singapore’s high performance coaches supports the findings from the
literature (e.g., Côté & Gilbert, 2009; Gilbert et al., 2009; Young et al., 2009) that: (a)
coaches were competitive athletes in the sport they coached, and (b) they had attained at least 10 years of coaching experience prior to coaching at the elite level. Nevertheless, some of the participant coaches also trained and prepared for structured inter-school competition from their early primary school days, which is unique in Singapore’s education system. The result is different from those reported in earlier studies where children (below 12 years old) are usually sampling different type of sports in a non competitive environment (e.g., Côté & Fraser-Thomas, 2007; Erickson et al., 2007).

**Sporting experiences.** Most of the participants in the present study took part in at least two non-competitive sports when they were in primary school (below 13 years old), which is consistent with the findings of Erickson et al. (2007); however, it was noted that four of the nine coaches in the present study were also involved in competitive sport participation (2 Categories: 13 years old and below, 11 years old and below) organised by the Singapore Primary Schools Sports Council, which contradicts what was reported by Erickson and colleagues. The inter-primary school competition is a unique sports system in Singapore, which is an important annual event in the school’s sports calendar. The competition is highly competitive and individual schools compete for the Sustained Achievement Award (SAA) by the Ministry of Education (MOE) if they are able to maintain a consistent performance results over three years (i.e., achieve top four positions for two sports in two divisions). Within this norm-referenced competitive context, school leaders, coaches and athletes are likely to be put under pressure to perform.

Currently, the Singapore Primary Schools Sports Council is organizing structured competitions for 27 sports that usually last up to four months, depending on the nature of each sport and the number of participants involved. Young children are screened and begin to specialise in the sport for which they have been identified as potential school representatives. External coaches are hired to train and prepare the school team athletes to
compete and perform at the inter-school competition. Such a system might be considered as potentially problematic because research shows that early specialisation and investment in competitive sports may result in burnout, stress and dropout (e.g., Côté & Gilbert, 2009). In the present study, only four coaches competed in structured competition when they were in primary school. Conversely, all participant coaches were involved in at least two sports at the recreational level during early sport participation (below 13 years old). As all children in Singapore are required to attend 10 years compulsory education and are likely to be involved in sports, policy makers may need to review the current inter-primary school competition system to ensure that athletes do not suffer burnout, stress and dropout due to structured competitions at their younger age. The reason is because some of these athletes may progress to the elite level, or become a coach at the later stage of development and involvement in sports (Saga, 1989). Accordingly, children should enjoy the sporting experience while in school so as to facilitate their long term participation and subsequent development.

The results of the present study are consistent with the findings from several studies (e.g., Côté & Gilbert, 2009; Gilbert et al., 2009; Young et al., 2009), which showed that coaches accumulated thousands of hours as athletes in competitive sports. For example, Young et al. (2009) examined the developmental experiences and learning activities of the Canadian track and field from club, provincial and national coaches and found that national track and field coaches had 11.8 years of former athletic career prior to their current coaching position. This result was similar to that found with samples of Australian high performance athletics coaches (e.g., Lynch & Mallett, 2006) and Canadian track and field coaches (e.g., Gilbert et al., 2006). It appears to be common across the studies that a minimum 10 years of sport participation is a pre-requisite to be a national or high performance coach. Furthermore, it was noted that coaches in the present study were often the key / first-string players and
were self-reported as highly skilled in relation to their peers. The results are consistent with those reported in the sports coaching literature (e.g., Gilbert et al., 2006; Lemyre et al., 2007). Salmela (1995), Erickson et al. (2007), and Young et al. (2009) found that experience as elite athletes in the sport that they now coach was not a necessary pre-requisite to high performance coaching. Results of the present study are partially consistent with this observation. In this study, two coaches did not compete at the elite level. Nevertheless, it should be noted that about 77.7% of the participant coaches in the present study had elite level experience as an athlete in basketball. This elite playing experience might be useful to becoming high performance coaches (e.g., Erickson et al., 2007; Schinke et al., 1995; Young et al., 2009); for example, in understanding athletes’ needs and concerns, as well as high performance training and coaching aspects.

In the present study, it was also noted that coaches had experience playing other sports (individual or team sports) as an athlete, which was found in previous studies (e.g., Erickson et al., 2007; Gilbert et al., 2006; Lynch & Mallett, 2006). These varied sporting experiences may have aided their development as players and as coaches, especially the experience at the developmental level where they had opportunities to observe the coaching, teaching, and interpersonal practices of different coaches. At the same time, they probably acquired some rudimentary coaching knowledge, skills and values (Sage, 1989; Werthner & Trudel, 2006). The opportunity to sample a variety of sports may provide a range of experiences that may have a positive effect on the athletes’ motivation and interest in future sport coaching (Gilbert et al., 2009).

All participant coaches had competed in basketball at least at the developmental level. The results are consistent with earlier studies found in the literature (e.g., Erickson et al., 2007; Gilbert et al., 2009; Lynch & Mallett, 2006). For example, Gilbert et al. (2009) reported a significant correlation between the time spent as an athlete (and becoming a coach)
and coaching success. Sporting experiences might produce a respect and admiration for
coaches, and this may strongly influence the decision to become a coach (Sage, 1989). Others
believe that this experience helps to familiarise and prepare future coaches (e.g., Cushion,
Armour, & Jones, 2003; Young et al., 2009). Taken together, the athletic sporting
experiences appear to be important for the development of high performance coaches (e.g.,
Côté & Gilbert, 2009; Gilbert et al., 2006; Gilbert et al., 2009; Lemyre et al., 2007).
Consequently, coaches and sport organisations should aim to create and provide positive
experiences to athletes so that they are motivated to stay active in sport participation, and are
inspired to become involved in coaching later (Saga, 1989).

Coaching experiences. Only four of the nine coaches in the present study reported
that they had coaching experiences at the recreational level. This suggests that coaching at
the recreational level may not be necessary for the development of high performance coaches
(Côté, Young, North, & Duffy, 2007; Lyle, 2002; Trudel & Gilbert, 2006). Also, high
performance basketball coaches in Singapore were clearly not coaching the same diversity of
sports they had played, which is consistent with previous findings (Côté & Gilbert, 2009;
Erickson et al., 2007; Lynch & Mallett, 2006). The results of the present study are consistent
with previous studies that most coaches had some coaching experience prior to becoming a
high performance head coach (e.g., Erickson et al., 2007; Trudel & Gilbert, 2006), which is
not surprising.

It was interesting to note that all participants had extensive experience (approx. 19
years) coaching school team athletes at the developmental level. The results were not
surprising as schools are a common place to experience coaching and at the same time,
receive remuneration for coaching work in Singapore. According to a survey conducted by
the Singapore Sports Council in 2004, 96.9% of schools survey reported that they had
employed external coaches to train their school team athletes (School Sports, 2005). These
coaches are in high demand as their key task is to help athletes excel in the inter-school competitions organized by the Singapore Schools Sports Councils for which there is public recognition and reward for a schools’ success. Perhaps, this could be the contributing factor for the age difference in part-time early coaching between the present study (18-30 years) and those reported by Erickson et al. (2007) (24-28 years). Coaches in Singapore might be more driven by externally-regulated rather than more internally-regulated motives (Deci & Ryan, 1985). In addition, anecdotal evidence suggests that coaches with relevant sporting experiences (e.g., representation at school, club or state level in the sport they are coaching) were generally paid better, especially if they had experience at the elite level. It seems that allowing retiring and retired elite level athletes opportunities to be involved with coaching might be highly beneficial to them. Hence, giving these athletes the essential coaching knowledge and helping them balance the time spent on coaching and coping with the demanding training schedule is considered of utmost importance for the development of future elite coaches as suggested by Erickson et al. (2007).

Findings from the present study suggest that the pursuit of a coaching career tends to occur during or after the athletes retire from competitive sport. Typically, coaches obtained formal coaching qualifications through formal coaching courses. In addition, the average starting age for high performance coaching position ranged from 26 to 49 years ($M = 33.2, SD = 7.2$), which is four years later than that reported in previous studies (e.g., Côté, 1999; Côté & Fraser-Thomas, 2007; Erickson et al., 2007). The reason for the difference in starting age (i.e., elite coaching) could be due to the national service that is compulsory for all male Singaporeans. Typically, all male Singaporeans are enlisted to serve a two-year full-time national service when they are 19 years old, which may delay athletes’ entry into coaching post-retirement from elite sport participation and development. Moreover, there are probably limited opportunities in Singapore compared with the collegiate system in North America.
Coaches’ Learning Opportunities

Previous literature has reported that coaches participate in a range of learning opportunities (e.g., formal, non-formal and informal), which differentially contribute to their development (Mallett, et al., 2009; Nelson, Cushion, & Potrac, 2006). Gilbert, Gallimore and Trudel (2009) suggested that coach learning is a social process and non-formal learning such as day-to-day learning experiences in the field has been a valuable method for learning how to coach. Hence, all forms of coach learning should be embedded in specific coaching contexts.

**Formal learning.** In a study conducted by Gilbert et al. (2009) on successful high school basketball and cross-country coaches, the authors found significant between-sport differences in the mean annual number of hours spent in coach education programmes. They suggested that due to the popularity and economic impact of basketball in the United States, basketball coaches were given additional opportunities to attend basketball clinics throughout the year as opposed to the cross-country coaches. Research has also shown that formal learning through coach education / accreditation programmes is often limited in the scope of their achievements (e.g., Abraham & Collins, 1998; Lyle, 2007). For the more elite coaches, such programmes have been shown to be ineffective in providing them with the knowledge and skills they need to be effective coaches (Cushion et al., 2003; Lyle, 2002; Mallett et al., 2009; Trudel & Gilbert, 2006). In the present study, it was noteworthy that the total number of hours spent in attending formal coach development training (e.g., coaching courses, coaching clinics) varied significantly, which might be due to several factors including the range of opportunities available, coach motivation, and time constraints (Gilbert et al., 2009; Young et al., 2009). The BAS provided three of the nine coaches’ formal learning opportunities as part of their commitment to professional development. Hence, the formal
training hours for this group of coaches was higher than that reported previously in the literature (e.g., Lynch & Mallett, 2006).

**Non-formal learning.** Gilbert et al. (2009) suggested that one of the greatest benefits of participating in non-formal coach education is perhaps an increase in coaching efficacy. This content is shared by coaches involved in the present study. Therefore, government agencies and national sport associations should aim to initiate and facilitate more non-formal learning opportunities for high performance coaches, at the same time, ensure that they are relevant and useful so that coaches develop competence and confidence in delivering quality coaching sessions (Young et al., 2009). In addition, deliberate efforts by national sport associations are needed to facilitate national coaches to acquire knowledge and competencies continuously throughout their career in order to benefit coaches and their athletes.

**Informal learning.** Informal learning opportunities has gained acceptance within the field of education (e.g., Hodkinson & Hodkinson, 2005), workplace (e.g., Billett, 2004; Boud & Garrick, 1999), and sport coaching (e.g., Cushion et al., 2003; Gilbert & Trudel, 2001; Mallett et al., 2009; Nelson et al., 2006). It was noted that the coaching and leadership experiences that the participant coaches had prior to high performance coaching might help in their informal learning experiences. For example, (a) reflection-in-action (i.e., during the action present such as during games or practices), (b) reflection-on-action (i.e., within the action-present but not in the midst of activity such as after games or practices), and (c) retrospective reflection-on-action (i.e., outside of the action present such as at the end of the season) as suggested by Gilbert and Trudel (2001). These three forms of reflection under different environments and coaching situations presented different learning opportunities for coaches to gain knowledge and exposure to reflective practices, which were likely to influence their coaching careers (Erickson et al., 2007).
Informal learning opportunities may occur through mentoring. In the present study, only one coach received formal mentorship from the head coach of the professional basketball team in Singapore. The mentorship opportunity in Singapore is much lower compared with the findings from previous studies (e.g., Gilbert et al., 2009; Lynch & Mallett, 2006). The assistant coach in the present had opportunities to observe his head coach in action during training sessions and games. Subsequently, he was able to challenge and / or affirm his own coaching practices and consequently refine his coaching behaviours over time if appropriate (Rynne, Mallett, & Tinning, 2006). In addition, through interactions and the exchange of ideas between the head coach and assistant coach, new ideas on coaching knowledge might be generated. This kind of informal learning at work is an important source of experiential learning for high performance coaches, especially for assistant coaches (Young et al., 2009). For example, Young and colleagues provided evidence that more skilled Canadian track and field coaches had received more mentoring throughout their career than lesser skilled coaches. The results were consistent with earlier studies conducted on Australian high performance athletics coaches (Lynch & Mallett, 2006) and Canadian university coaches in individual sports (Erickson et al., 2007). Although mentoring appears to be useful in enhancing coaching knowledge and practices, it was uncommon in this sample of Singapore basketball coaches. A key reason for the limited use of mentors in this cohort might be associated with ‘senior / master coaches’ protecting their ‘sacred’ knowledge as coaching can be a potential career even at the recreational or developmental levels. This is mainly due to the unique sports system in Singapore that places high demand on external coaches. Coaches may be too ‘afraid’ of sharing knowledge, or mentoring future coaches who may be contesting for the same job with them in future (Hoo, personal communication, April 16, 2010). The exact reasons are unknown and therefore, worthy of future investigation.

---

1 Hoo is currently the Honorary Secretary of the Basketball Association of Singapore (BAS). He is one of the
In a series of studies, Mallett and colleagues examined how elite coaches learned for and during coaching work and found that much of coaches’ learning was informal (Mallett, et al., 2009). They reported that although such informal learning opportunity is authentic and contextualised, it might suffer from a lack of quality control, direction, feedback, and innovation (Mallett et al., 2009). In addition, coaches may have difficulties accessing some opportunities due to the contested nature of sport at all levels (e.g., Lemyre, et al., 2007; Mallett et al., 2009; Wright et al., 2007). Findings from the present study suggest that creating a supportive informal learning environment and identifying more experienced coaches who are willing to be mentors might help to nurture high performance coaches. Accordingly, sports associations and policy makers are encouraged to consider facilitating learning communities that promote sharing of coaching knowledge (Gilbert et al., 2009), which includes developing mentoring systems to promote the culture of sharing within the basketball community so as to facilitate coaches’ learning and development.

Implications and Limitations

The findings of the present study provide some insight into the context of Singaporean high performance sport. More specifically, the findings provide some evidence to support future coach development in Singapore, especially in basketball.

First, the findings from this study reinforce calls by previous researchers (e.g., Cushion et al., 2003; Trudel & Gilbert, 2006) to ensure that coach education programmes designed for coaches are relevant and specific to coaches. The idea proposed by Gilbert et al. (2009) on creating professional learning communities to complement large-scale coach education programmes is worthy of consideration. Consequently, policy makers in coach education programmes should review the relevance of learning experiences to the reported coach development needs of coaches.
Second, athletes’ experience in sport participation may influence their decision in taking up coaching (e.g., Cushion et al., 2003; Gilbert et al., 2006; Gilbert et al., 2009; Lemyre et al., 2007; Young et al., 2009). Hence, creating and providing a positive sport experience for athletes is important, as it is likely to promote self-motivation to actively engage in the sport as a coach at some later stage (Sage, 1989).

Finally, the importance of self-evaluation and peer-evaluation should be promoted to facilitate coaches’ learning through appropriate reflection (Koh, 2009b). Appropriate means can be used to collect relevant and contextual qualitative and quantitative data from athletes and coaches to assist in the reflection process. Subsequently, coaches should be guided in using reflective strategies to problem-solve coaching issues and subsequently promote personal and professional growth. Mentors, confidantes, and coaching communities can facilitate the reflective process and subsequently mediate or guide the learning opportunities (Mallett, et al., 2009).

While there are some common means through which coaches develop across contexts, unique environmental factors do exist and should be accommodated. The significant contribution of the current study is that it examined the developmental pathways of high performance coaches in an Asian context, which was not found in the existing sport coaching literature. This study also highlighted some of the unique systems in Singapore such as the inter-school competitions, the absence of mentoring, the support for coach development through the national sporting organisation, and compulsory two-year national service for healthy male Singaporeans that influence the development of basketball athletes and high performance coaches.

Despite some contributions to the literature, there are some limitations of this study. First, this study only focused on the developmental pathways of high performance basketball coaches in Singapore. As such, caution is warranted in generalising the findings to other
sports within Singapore. In addition, cultural differences should be considered when viewing
the results. The results may be different when the study is conducted in other countries with
established sports systems and more advanced coach education and development programmes.
To examine the effects of these findings in the medium term requires some further
examination (perhaps some ongoing monitoring) of high performance coach development in
Singapore basketball. Moreover, further examination of other sports within Singapore is
encouraged.

Conclusion

The purpose of this study was to identify the sporting and coaching experiences of
high performance coaches and their developmental pathways to high performance coaching.
Results of this study shed some light on the important activities that seem critical to coaches’
developmental pathways in high performance settings using a small sample in Singapore.
Future research should continue to examine the pathways of high performance coaches in
other cultures and contexts, especially in Asia, to enrich our knowledge in this body of
research, and provide guidance to policy makers of the necessary support and training to
groom future high performance coaches more effectively.
References


### Table 1

**Singapore High Performance Basketball Coaches’ Profile (Head and Assistant Coaches)**

<table>
<thead>
<tr>
<th>Coaches</th>
<th>Gender</th>
<th>Age</th>
<th>Highest Educational Qualification</th>
<th>Highest Coaching Qualification</th>
<th>Years in Coaching</th>
<th>Elite</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Normal Level = 1</td>
<td>Advance Level = 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Diploma = 3</td>
<td>Bachelor’s Degree = 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Master’s Degree = 5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Male</td>
<td>40</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>25</td>
</tr>
<tr>
<td>2</td>
<td>Female</td>
<td>32</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>20</td>
</tr>
<tr>
<td>3</td>
<td>Male</td>
<td>56</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>32</td>
</tr>
<tr>
<td>4</td>
<td>Male</td>
<td>36</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>35</td>
</tr>
<tr>
<td>5</td>
<td>Male</td>
<td>44</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>6</td>
<td>Male</td>
<td>41</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>7</td>
<td>Female</td>
<td>29</td>
<td>5</td>
<td>3</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>8</td>
<td>Male</td>
<td>60</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>35</td>
</tr>
<tr>
<td>9</td>
<td>Male</td>
<td>52</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Mean</td>
<td></td>
<td>43.3</td>
<td></td>
<td>1.4</td>
<td>19.4</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td></td>
<td>10.7</td>
<td></td>
<td>1.5</td>
<td>11.4</td>
</tr>
</tbody>
</table>

*Key: Qualifications – Normal Level = 1; Advance Level = 2; Diploma = 3; Bachelor’s Degree = 4; Master’s Degree = 5*
Table 2

*Sporting Experiences of High Performance Basketball Coaches (Head and Assistant Coaches)*

<table>
<thead>
<tr>
<th>Item</th>
<th>Min.</th>
<th>Max.</th>
<th>M</th>
<th>SD</th>
<th>f</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of years played at recreational level</td>
<td>2</td>
<td>8</td>
<td>3.9</td>
<td>2.0</td>
<td>9/9</td>
</tr>
<tr>
<td>Starting age at recreation level</td>
<td>8</td>
<td>12</td>
<td>10.8</td>
<td>1.8</td>
<td>9/9</td>
</tr>
<tr>
<td>Highest leadership assigned at recreational level</td>
<td>2</td>
<td>3</td>
<td>2.7</td>
<td>0.5</td>
<td>9/9</td>
</tr>
<tr>
<td>Highest self-rated ability recreational level</td>
<td>6</td>
<td>8</td>
<td>6.9</td>
<td>0.8</td>
<td>9/9</td>
</tr>
<tr>
<td>Number of years played at developmental level</td>
<td>2</td>
<td>32</td>
<td>15.0</td>
<td>8.2</td>
<td>9/9</td>
</tr>
<tr>
<td>Starting age at developmental level</td>
<td>13</td>
<td>18</td>
<td>14.3</td>
<td>1.4</td>
<td>9/9</td>
</tr>
<tr>
<td>Highest leadership assigned at developmental level</td>
<td>1</td>
<td>3</td>
<td>1.7</td>
<td>1.0</td>
<td>9/9</td>
</tr>
<tr>
<td>Highest self-rated ability at developmental level</td>
<td>5</td>
<td>9</td>
<td>8.3</td>
<td>1.3</td>
<td>9/9</td>
</tr>
<tr>
<td>Number of years played at elite level</td>
<td>1</td>
<td>14</td>
<td>7.0</td>
<td>4.4</td>
<td>7/9</td>
</tr>
<tr>
<td>Starting age at elite level</td>
<td>18</td>
<td>24</td>
<td>19.3</td>
<td>4.5</td>
<td>7/9</td>
</tr>
<tr>
<td>Highest leadership assigned at elite level</td>
<td>1</td>
<td>3</td>
<td>2.3</td>
<td>3.0</td>
<td>7/9</td>
</tr>
<tr>
<td>Highest self-rated ability at elite level</td>
<td>7</td>
<td>9</td>
<td>8.0</td>
<td>1.0</td>
<td>7/9</td>
</tr>
</tbody>
</table>

*Note:* $f = $ frequency of non-zero responses
Table 3

Coaching Experiences of High Performance Basketball Coaches (Head and Assistant Coaches)

<table>
<thead>
<tr>
<th>Item</th>
<th>Min</th>
<th>Max</th>
<th>M</th>
<th>SD</th>
<th>f</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of years coaching at recreational level</td>
<td>1</td>
<td>4</td>
<td>2.0</td>
<td>1.0</td>
<td>4/9</td>
</tr>
<tr>
<td>Starting age coaching at recreational level</td>
<td>18</td>
<td>28</td>
<td>22.7</td>
<td>3.2</td>
<td>4/9</td>
</tr>
<tr>
<td>Number of years coaching at developmental level</td>
<td>8</td>
<td>35</td>
<td>19.4</td>
<td>11.4</td>
<td>9/9</td>
</tr>
<tr>
<td>Starting age coaching at developmental level</td>
<td>19</td>
<td>30</td>
<td>24.3</td>
<td>3.6</td>
<td>9/9</td>
</tr>
<tr>
<td>Number of years coached as AC at developmental level</td>
<td>2</td>
<td>6</td>
<td>4.0</td>
<td>1.6</td>
<td>4/9</td>
</tr>
<tr>
<td>Number of years coaching at elite level</td>
<td>3</td>
<td>10</td>
<td>5.1</td>
<td>2.4</td>
<td>9/9</td>
</tr>
<tr>
<td>Starting age coaching at elite level</td>
<td>26</td>
<td>49</td>
<td>33.2</td>
<td>7.2</td>
<td>9/9</td>
</tr>
<tr>
<td>Number of years coached as AC at elite level</td>
<td>2</td>
<td>8</td>
<td>3.0</td>
<td>2.2</td>
<td>5/9</td>
</tr>
<tr>
<td>Total hours of formal coach development training</td>
<td>70</td>
<td>800</td>
<td>110.0</td>
<td>267.4</td>
<td>7/9</td>
</tr>
</tbody>
</table>

Note: AC=Assistant Coach, f = frequency of non-zero responses
Figure Caption

Figure 1. Stages of Development for High Performance Basketball Coaches. Adapted from Erickson, Côté, & Fraser-Thomas (2007).
Early Sport Participation (Age 8 – 12)
- Diverse sports participation
- Participation at recreational level with no formal/organized competitions
- Early participation in competitive sport

Competitive Sport Participation (Age 13 – 18)
- Participation in at least one sport at a competitive level
- Usually focuses on one sport, eventually coaching that particular sport, but often play and/or represent in other sports at competitive level

Highly Competitive Sport (Age 18 – 24)
- Competitor in sport at an elite level (e.g., national team)

Part-time Coaching (Age 18 - 30)
- Coaching part-time at developmental level (e.g., schools, clubs etc.)
- Engage in formal coaching training and development

High Performance Coaching (Age 26 - 49)
- Retirement from elite sporty participation
- Employment as an assistant/head coach (high performance coaching) position