

A Guided Reflection Intervention for High Performance Basketball Coaches

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The purpose of this study was to conduct a guided reflection intervention for high performance basketball coaches. The study participants included two head basketball coaches and 10 of their players who were part of elite youth teams in Singapore. The coaches were highly experienced, each with 17 and 20 years of coaching experience respectively, and the players from both teams (one male and one female) reported on average three years of playing experience at the national youth level. The Singapore coaching behavior scale for sport (CBS-S basketball), on-site observations, and interviews were used to gather data from the coaches and players. Coaches also kept a reflective journal throughout the intervention. The results showed how the coaches responded differently to the guided reflection intervention (implemented by the first author) in terms of their willingness to adapt and integrate new perspectives into their coaching practice. The coaches' level of reflection was found to be contingent upon a) their motivation and desire to be engaged in the process and b) the worth they saw in the learning facilitator's recommendations to improve their athletes' technical and tactical development. The results also showed how the coaches' behaviors were linked to players' satisfaction level with their work. The results are discussed using the coaching science literature and practical implications are proposed to optimize coaches' use of reflection as a learning tool to improve their coaching practice.

Keywords: reflective practice; reflection; learning; coach development; learning situations

High performance sport is a context that is often characterized as being highly spontaneous, unpredictable, and subject to intense and continuous scrutiny by fans and media (Cushion, 2007). High performance coaches are required to continually learn and develop their craft to remain competitive and retain their jobs (Mallett, 2010). Coaches have been shown to learn from various situations

such as formal and informal situations (see Cushion & Nelson, 2013 for a review). Formal learning situations refer to training that occurs in structured settings under the guidance of instructors such as coaching classes, clinics, or certification programs (Cushion & Nelson, 2013). Informal learning situations include training that takes place outside the standard classroom setting such

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as athletic involvement, self-directed learning, or other experiences with less guidance from instructors (Cushion & Nelson, 2013). Other researchers such as Werthner and Trudel (2006) have proposed a theoretical perspective for understanding how coaches learn to coach using Moon's (1999, 2004) work, which postulates three main types of learning situations: (a) mediated, (b) unmediated, and (c) internal. In mediated learning situations (e.g., coaching courses, formal mentoring), the materials presented are decided upon and directed by a person other than the learner. In unmediated learning situations (e.g., discussion with other coaches, searching the internet), there are no instructors or teachers and the learner is responsible for choosing what to learn. Finally, in internal learning situations, the learner is not exposed to new materials, but reconsiders or reflects on existing ideas in his/her cognitive structure.

In an empirical study of Canadian Olympic coaches, Werthner and Trudel (2009) demonstrated how coaches differ dramatically in terms of how different types of learning situations have influenced their development. Further, previous life experiences have been shown to highly influence coaches' choices in terms of preferred learning situations. Given that individuals sharing similar coaching roles within similar coaching contexts have been shown to prefer different learning situations (Trudel, Gilbert, & Werthner, 2013), it is important for researchers to continue studying how coaches learn to coach to derive knowledge that can guide effective policies and sound practices. In this paper, we have adopted Werthner and Trudel's (2006) theoretical perspective to explain how our coaches learned to coach in different learning situations.

The effectiveness of mediated learning situations in developing coaches' knowledge, skills, and competencies is disputed in the coaching science literature. Researchers have discussed the importance of formal coach education programs in promoting quality coaching practices (Gilbert & Trudel, 2001; Koh, Mallett, & Wang, 2009; Lyle, 2002) but have also reported the often low transferability of formal coach education material to real-life coaching scenarios (Cushion et al., 2010; Gilbert, Gallimore, & Trudel, 2009; Mallett, Trudel, Lyle, & Rynne, 2009). Given that sports coaching 'takes place within a complex system of human interaction that demands specialist knowledge and skills that cannot be taught within the standard curriculum time' (Miles, 2011, p. 112), 'on-the-job' training (i.e., unmediated and internal learning situations) should be further promoted to enhance knowledge, skills, and improve performance (Gilbert & Trudel, 2006). There is evidence suggesting that unmediated and internal learning situations such as engaging in reflection (Gilbert & Trudel, 2001, 2006), having access to knowledgeable others (Cassidy, Jones, & Potrac, 2009; Werthner & Trudel, 2009), and being mentored by experienced coaches (Bloom, Durand-Bush, Schinke, & Samela, 1998; Cushion et al., 2013) can enhance coaches' learning. However, intervention research designed to facilitate unmediated and internal learning situations with coaches remains scarce, especially at the high performance level.

Reflection, as an internal learning situation, has been shown to play an important role in enhancing the knowledge of practitioners in various fields such as nursing (Powell, 1989) and education (Attard & Armour, 2006; McMormack, 2001). In sport, reflection can help coaches create their own blueprint for success, but it is a complex skill that requires practice to reap benefits (Irwin, Hanton, & Kerwin, 2004; Miles, 2011). Gilbert and Trudel (2001, 2005) conducted a series of studies to better understand how youth sports coaches can learn by engaging in reflective conversations. They have developed an effective framework for analyzing and explaining the reflective process. They have also identified three types of reflection that coaches typically engaged in (i.e., reflection-in-action, reflection-on-action, and retrospective reflection-on-action). Reflection-in-action refers to the process of consciously engaging in reflection during coaching. Reflection-on-action refers to engaging in reflection after an event has occurred but while there still is an opportunity to apply potential solutions to resolve the event. Lastly, retrospective reflection-on-action is defined as reflection on a coaching problem that occurs after the event has happened. For coaches to become reflective practitioners, they must be competent at framing their roles and identifying issues to subsequently generate, experiment, and evaluate strategies aimed at solving the issues they have identified. Without a structured reflective process, coaches' reflective practice may be uncritical and thus have a lower likelihood of meaningfully impacting actual coaching strategies.

Recently, Gilbert and Trudel (i.e., Gilbert & Trudel, 2013; Trudel & Gilbert, 2013) have pushed the matter even further by discussing important differences between reflective practice and critical reflection. During reflective practice, coaches "will typically step back after an event to evaluate what happened and will determine how best to proceed" (Trudel & Gilbert, 2013, p.15). Examples of reflective practice include reviewing game videos and statistics or engaging in in-depth conversations with assistant coaches. However, critical reflection consists of much more than just taking a step back; coaches must delve deeper and genuinely question their thought-processes. Reflecting critically is not an easy endeavor and often requires that coaches seek support from experts who can add much-needed structure to the reflective process.

Werthner and Trudel (2009) noted that although the high performance coaches in their study were continuously thinking about coaching, few of them appeared to engage in meaningful reflection. In recent years, a number of researchers have offered practical suggestions on how to structure the reflective process and guide coaches to reflect more critically and effectively. Some researchers (e.g., Gilbert & Trudel, 2013; Hughes, Lee, & Chesterfield, 2009; Jonker, Elferink-Gemser, Roos, & Visscher, 2012) have discussed the possibility of integrating reflection-cards which can help guide and evaluate reflection systematically, thus promoting coaches' development. For their part, Mallett and Côté (2006) suggested using athletes' feedback as a catalyst for helping coaches reflect and evaluate their work. The importance of facilitators in

guiding and enhancing coaches' reflection has also been suggested (Culver & Trudel, 2006; Koh, Mallett, & Wang, 2011; Wright, Trudel, & Culver, 2007). Facilitators are of great value because they can guide coaches in the reflective process by asking them to reflect on existing ideas in their cognitive structure (Moon, 2004), challenging their coaching practices, proposing areas for improvement and formulating ideas for change in nonthreatening manners (Gilbert & Trudel, 2001). In order for the guided reflection with learning facilitators to be productive, it must be built upon trust and openness. However, it is essential to note that learning facilitators have complex roles and their potential value is mediated strongly by their ability to negotiate their rightful place in the reflective process by clearly understanding coaches' personal biography and needs (Trudel & Gilbert, 2013).

Cropley, Neil, Wilson, and Faull (2011) conducted an intervention over a five-week period with the purpose of nurturing a reflective process to help two soccer coaches deal with their coaching problems. Through engaging in reflective conversations, the coaches' self-awareness levels improved and they also reported an increased understanding of their players and the coaching environment. However, apart from the Cropley et al.'s study, there have been few evidence-based studies (e.g., interventions) to demonstrate the utility of reflective practice within sport for practitioners (Huntley, Cropley, Gilbourne, Sparkes, & Knowles, 2014), and how learning facilitators aimed at improving the reflective process of coaches, especially in high performance sport. Further, Trudel, Culver, and Werthner (2013) noted that among the three types of learning situations, the internal learning situation has received the least amount of empirical investigation. In most cases, studies on coaches' reflective practice have been confined mainly to Western societies and as such, research is warranted to support the usefulness of this practice in other cultures. Therefore, the purpose of this study was to conduct a guided reflection intervention for high performance basketball coaches in Singapore. The findings of the current study can help us better understand how high performance basketball coaches respond to learning facilitators and how guided reflection can aid coach development.

Method

Participants

Coaches and Players. Head coaches and players from two elite under-18 teams (one male and one female) in Singapore were purposefully recruited. The study was conducted when the two teams were preparing to take part in an international competition. The participants were two male head coaches, with the boys' team coach being 43 years of age and the girls' team coach being 51 years of age. A total of 10 players (5 boys, $M_{age} = 17.2$ years, $SD = .52$; 5 girls, $M_{age} = 17.0$ years, $SD = .56$) also took part in the study. The coach of the girls' team had accumulated 20 years of youth coaching experience with

boys and had just switched to coaching girls at the time of the study. The coach of the boys' team had 17 years of youth coaching experience and specialized in coaching boys' teams only. Both coaches had five years of coaching experience at the national youth team level. As there are only two head coaches for the two teams at this age group in the country, the research team deemed it appropriate to invite them to participate in the study. The players from both teams (male and female) reported on average three years of playing experience at the national youth level.

Learning Facilitator. The first author acted as the learning facilitator (LF) for the two coaches. The LF played competitive basketball at the regional level for five years before transitioning to coaching where he accumulated 17 years of experience as a coach. In terms of accreditation, the LF holds both local and international coaching licenses. He also participates in many local, regional and international committees in the sport of basketball.

The Intervention Program

Preintervention Phase. First, a university ethics committee approved the study. Basketball Association of Singapore (BAS) personnel were then briefed about the purpose of the study and subsequently provided their approval to conduct the intervention. The two coaches of the under 18 teams (one male team and one female team) were approached and were informed of the purpose and benefits of taking part in the current study. They also were told that participation in the study was voluntary and that they had the right to withdraw from the study at any time. They gave their consent to participate in the study. Subsequently, the LF met with the Honorary Secretary of BAS and the two coaches to discuss the rationale of the study and his involvement with the teams. He explained to them the importance of not only getting feedback from players but also how essential it is to reflect on one's practice to improve as coaches. He shared with them how he could help in this aspect based on his experience and training. Following this meeting, the coaches formally agreed to work with the LF. The LF then met the players of the two teams and explained to them the rationale of the study and all of them volunteered to participate.

Once recruitment was completed, the CBS-S (basketball) scale (Koh et al., 2009) was used to collect baseline data from the players and coaches on perceived coaching behaviors. The scale consists of 10 dimensions and 104 items, measuring different coaching behaviors on a 7-point Likert scale. Respondents indicated the frequency of various coaching behaviors they experienced as well as their satisfaction levels with various aspects of coaching. The results of the scale were summarized by the LF and were reported to the coaches one week later in three forms: (a) a summary of the coaching behaviors as perceived by the coaches and players, (b) the mean score for each subscale, and (c) each player's scores for each item. The information was used to engage the coaches in a reflective conversation and guide them in the reflective

process (Gilbert & Trudel, 2001). Of particular interest was to guide the coaches in identifying the “gaps” or “differences” in scores between the players and the coaches from the CBS-S (basketball) questionnaire as a source of reflection material.

A first round of semistructured individual interviews was conducted with questions aimed at getting the coaches to reflect (Moon, 2004) on the information presented to them from CBS-S (basketball) scale. Informed consent from the coaches was obtained before interviewing. Participants were advised that their responses would be kept confidential. With the participants’ permission, the interviews were audio-recorded. The interview initially focused on scale results (e.g., Do you think the information provided from the CBS-S (basketball) is useful? If yes, how? If no, why not?) and how the coaches believe this information would be subsequently used (e.g., Will you be using the results of the CBS-S to inform your future training/coaching sessions? If yes, how? If no, why not?). The interview then focused on the coaches’ reflection process (e.g., How often do you reflect on your training/competition plan? What are the key components of your reflection?). The interviewing process allowed the coaches and the LF to discuss and determine the important areas of focus to help them improve their coaching practice. The interviews with the coaches lasted 86 and 94 min respectively.

Intervention Phase. The actual intervention itself occurred over 16 weeks and commenced when the LF conducted a workshop to expose coaches to reflective practice. The workshop was designed based on the principles of Werthner and Trudel’s (2006) theoretical perspective as well as Gilbert and Trudel’s (2001) framework. The workshop focused on getting the coaches to understand the three main types of reflection espoused (i.e., reflection-in-action, reflection-on-action, and retrospective reflection-on-action). During the workshop, the LF introduced the coaches to the idea of keeping a reflective journal. The LF explained that the journal would be useful to help them reflect on their experiences and would provide the LF an opportunity to examine the quality of their reflective process. Within the journal were structured questions to guide the coaches’ thought process and help them explore alternative options to derive action plans to solve their coaching issues. The questions, based on Gilbert and Trudel’s (2001) framework, were essentially used to entice the coaches to reach for a deeper understanding of their practices. Specifically, coaches were encouraged to (a) describe and document specific coaching experiences (e.g., ‘What training/game plan was prescribed?’), (b) evaluate/analyze concrete situations that occurred during and after training/competitions (e.g., ‘What happened and why it happened?’), and propose a future action plan (e.g., ‘What will you do to solve this problem and prevent it from happening again?’).

During the intervention, the LF also conducted participant observation (Dewalt & Dewalt, 2011) to

observe how coaches ran their practices and behaved during games. In total, two practices and two friendly games for each coach were observed. The on-site observations provided a key opportunity to see how coaches implemented strategies to deal with issues identified in their reflective journals. Further, following each observation session, the LF interacted with the coaches and provided feedback to them, with the aim of improving their subsequent practices/games (e.g., how to increase the intensity of drills to develop players’ fitness; how to provide useful feedback to players at critical moments during games). The LF also maintained regular contact (at least once a week) with the coaches via e-mail or telephone to discuss current coaching issues and possible solutions. The regular interactions proved valuable in helping the coaches formulate appropriate strategies to solve their coaching issues.

Postintervention Phase. One week after the teams returned from their international competition, the LF interviewed the coaches individually for a second time to share what they had experienced during the season. Semistructured interviews were conducted to give the coaches the opportunity to discuss the benefits as well as the challenges of taking part in a guided reflective intervention. One interview lasted 67 min and the other 90 min. Examples of questions posed to the coaches were: Describe how you think the information provided to you from the CBS-S (basketball) influenced your coaching throughout the season? Discuss how you believe the guided reflection process helped you or not? Did the feedback provided help in your development as a coach?

Focus group interviews with a selection of players were also conducted to examine their perceptions of their coaches’ behaviors. Five players from each team were randomly selected to take part in two focus group interviews a few days after the season was completed. Some of the key questions included: Have you noticed any changes in your coach’s behavior after the preseason survey? What was your experience with the CBS-S (basketball) in providing feedback to your coach? How satisfied were you with your coach this year? Probing questions were used throughout the interviews to get the participants to clarify ideas or elaborate on certain responses (Patton, 2002). The boys’ focus groups lasted 45 min while the girls’ lasted 60 min.

Data Analysis

Singapore CBS-S (Basketball) Scores. Descriptive statistics for both teams were calculated. The quantitative data and the subsequent reports that were derived from the CBS-S (basketball) during the preintervention stage were used to guide the coaches’ reflection.

Qualitative Data. All six interviews (four individual coach interviews, two player focus group interviews) were transcribed by the first author, which resulted in

56 pages of A4 size single-spaced text. The first author checked the transcripts for errors and sent them to the coaches via e-mail to have them confirm the accuracy of the shared information. Minor changes were made by one of the coaches. The interviews were stored in the NVivo 8 (QSR International, 2008) computer software program, which was used to organize the data. Data were analyzed using thematic analysis procedures (Braun & Clarke, 2006). The process began with the division of the text from each interview into meaning units, which are pieces of information that convey a specific meaning. These pieces of text were given specific labels (codes) and similar meaning units were grouped and ultimately organized in a hierarchical fashion (theme). For example, some meaning units were coded in the subthemes 'usefulness of guided reflection' and 'no desire to reflect' which were then grouped under the theme of 'receptiveness to intervention'. A total of 146 meaning units and 24 codes were developed in the analysis of the coaches' and players' interviews. Three main themes were created from the codes that were associated with reflective practice, as perceived by the coaches (see Table 1). The data were reviewed by the second author who is experienced in qualitative research to help increase the credibility of the analytical procedure. Upon discussions, the writing team decided to organize the findings of each team individually to illustrate the process and impact of guided feedback on each of the coaches.

Results

The three main themes associated with coaches' perspective on the guided reflection intervention were a) receptiveness to the intervention, b) content of reflection, and c) impact on coaching. The themes are presented and are supported with participant quotes. To distinguish individual participants and for confidentiality purposes, quotes are identified as either Coach A or Coach B, and P1-P10 for the players. A first person account is used to

present the findings from the perspective of the learning facilitator (first author).

Coaches' Receptiveness to the Intervention

Coach A was motivated to learn and receptive to the idea of taking part in the guided reflective intervention. He was constantly seeking feedback from me and we engaged in a number of 'shared conversations' over the course of the intervention. For example, during our first meeting, he discussed how he knew about the importance of mental skills on players' performance at the elite level but lacked the knowledge and time necessary to talk about 'sport psychology' principles with his players:

I want my players to be mentally prepared and be able to apply it (mental skills) during training and games. However, a lack of knowledge and time has prevented me from achieving this task. I would like to learn more from you on this aspect so as to add value to my team and personal development.

In the days following his comment, I proceeded to provide him with some useful reading material and practical tips on how to use 'positive self-talk' to develop his players' focus, self-confidence, and motivation. Coach A was very eager to teach his players self-talk and I was able to observe him at work during my first on-site visit. He discussed self-talk with his players and the following quote highlights his motivation to consider feedback from me and the players as part of his reflective process:

In my [retrospective] reflection on the weekly training plan, I always focus on areas that I have identified after the pre-season feedback such as technical skills, physical training and conditioning, goal setting [individual and team] and how to improve in these areas... I am open to ideas to improve my coaching ... I am willing to try out new coaching ideas.

Table 1 Factors Associated With Reflective Practice for Participant Coaches

Themes	Sub-Themes
Receptiveness to intervention	<ul style="list-style-type: none"> • Usefulness of guided reflection • No desire to reflect
Content of reflection	<ul style="list-style-type: none"> • Technical • Tactical
Impact on coaching	<ul style="list-style-type: none"> • Increased self-awareness • Better understanding of coaching practice • Awareness of players' feelings and concerns • Increased athlete satisfaction

In contrast, it proved difficult to work with Coach B during the intervention because he appeared to have a ‘fixed mental model’ of what he conceived to be quality coaching practices. During our encounters, Coach B exhibited minimal motivation and even a certain level of resistance in terms of considering changes in his approach to coaching. However, initially, Coach B seemed to have some openness to change when he said in interview that: “I want my players to learn and benefit from my coaching... I am willing to change my coaching style to meet their needs; for example, communication skills and establishing good rapport with them”. Despite such a statement, during the intervention itself, Coach B rarely brought up coaching issues and did not invest much effort in nurturing his reflective process. He revealed how the team debriefing sessions he organizes at the end of his practices and games provided him with sufficient material to improve the content of his subsequent sessions. For example, during an on-site visit when his team was participating in a friendly match, I noticed how the opposing team employed a tactical defence strategy known as “full-court pressure”. His players were making bad decisions and many inaccurate passes which prevented them from breaking the defence. The coach called for timeout and made adjustments, but the players did not resolve the full-court pressure and eventually this led to a lopsided loss. During the postgame debrief, Coach B was upset with his players’ performance but told them that he would design drills for them to work on. Following the debrief with the players, I asked Coach B questions to get him to reflect on his team’s inability to counter the defensive play of the opposing team. The exchange was cold and he said that given his extensive coaching experience, he would find a way to deal with his team’s offensive problems.

In his postseason interview, Coach B was quite honest and stated: “I did not make major changes or adjustments in my coaching after the pre-season meeting. I was happy with what I was doing.” Moreover, Coach B expressed a certain level of skepticism around the guided reflective intervention. Without referring to himself, he indirectly stated how some coaches may view the ideas of learning facilitators from a critical perspective rather than a constructive point of view. He further explained how the process may influence some coaches to be extrinsically motivated to change rather than intrinsically motivated:

Some may think that you are trying to find faults/mistakes with them ... they may change their coaching approaches in order to please you for now...it can turn out to be positive [changing practices to benefit the self and the team] or negative [changing practices for the sake of wanting to please others].

As further evidence highlighting his skepticism, Coach B discussed how he viewed as potentially problematic the use of the CBS-S (basketball) scale, which he believed could be used to “control” the coach. He said:

Players may use this approach [scale] as a weapon to manipulate the coach and his coaching approach so that they could give a “good report” for the coach. Again, the scores may not be a true reflection of what is actually happening on the ground!

Finally, Coach B raised the concern of how using players’ feedback to evaluate a coach’s work might lead to conflicting results based on players’ position on the team:

Personally, I feel that we need to be careful when it comes to players’ feedback. The feedback may be more accurate in individual sport such as table tennis where players are working very closely with their coach. Basketball is a team sport. There are about 15-18 players on my list. Those who are ranked from the 9th position onwards on the team may not be getting as much court time as opposed to the first 8 players. That presents an operation problem! You may be a good coach, but under this situation, you may not get a favorable report from this group (i.e., bench) of players.

Content of Reflection

During one of my on-site visits, I witnessed how Coach A engaged in “reflection-in-action” when he encountered a coaching issue in the midst of a coaching session, which required a quick response. Specifically, some of his players were having difficulties carrying out a shooting drill at the end of practice, probably due to fatigue. Coach A saw the problem, reflected, and decided to give the players a water break. Moreover, he shortened the distance the players needed to run before shooting. Subsequently, most of the players were able to achieve a higher shooting percentage.

During the postseason interviews and on-site visits, I noticed how Coach A focused on individual skills and tactical development. The following quote demonstrates how Coach A’s reflections were focused on the technical/tactical aspects of basketball:

Basketball is a team sport that requires players to work on individual skills as well as team plays in order to function and perform as a team. These are the key areas that I often reflected on and wanted to improve.

He further shared how he reflected on the information from the CBS-S (basketball) scale and adjusted his training focus to address the identified coaching issues:

Basically, I identified individual skills, mental toughness and fitness level as players’ weaknesses from the CBS-S report. I reflected on it and decided to set short-term goals [with them] and provided strategies for them to work on it [their goals]. Players found that the goals set were reasonable and achievable.

They were more engaged in the training sessions thereafter, which was very motivating for me.

Through reflection, it appears that Coach A also realized that young athletes do not want to solely engage in deliberate practice to improve their skills; they also want to engage in deliberate play to have fun. The following passage demonstrates how Coach A consequently devised a practical coaching strategy to simultaneously promote team bonding and skill acquisition:

If the team chemistry is weak, the players are going to have problems on and off the court... I encountered such problems with my team during the pre-season. I reflected and decided to use a 'play-practice' approach to better integrate team bonding and skill acquisition together. I usually set aside half an hour for players to know each other better through play instead of structured training. This approach has helped to improve the team spirit and increased the proficiency of players on the court.

On the other hand, due to Coach B's lack of motivation to invest in the reflective process, there was limited evidence of reflection occurring during the intervention. He seldom used the reflective journal as he deemed it to be too time-consuming. Further, he shared with me that he had difficulty writing down his thoughts on paper, claiming that he prefers to only think/reflect 'in his head'. Indeed, the content of his journal lacked depth, dealing mostly with technical drills.

During their postseason interviews, both coaches reported that since their team did not qualify to play at the next level during their international competition, they needed to invest time to reflect on the appropriateness of their training plans, methods, techniques, and strategies. The actual content of the coaches' reflection on these matters is unknown but such sentiments demonstrate some evidence that the coaches intended to undertake some form of "retrospective reflection-on-action".

Impact on Coaching

The structured reflection process appeared to have a positive influence on Coach A's self-awareness. During a discussion early in the season, Coach A explained to me how he wanted to improve his players' fitness levels. I suggested that he use drills that combine the learning of tactical concepts with fitness development to overcome time constraints. For example, I suggested an imbalanced offensive zone drill (3-on-2 scenario) that could be used to develop aerobic fitness as well as quick decision-making. I saw Coach A incorporate different iterations of this drill when I visited him twice during training sessions. Coach A verbalized in an interview how he was able to reflect on suggestions (my own and those of players from the CBS-S) and turn them into concrete coaching action plans:

After the feedback, I consciously made an effort to incorporate drills during practices to improve players' fitness and skills level. They were also given half an hour of weight training after Saturday's court training. This was what they wanted and I could easily incorporate it into their training sessions. I am constantly looking for improvement to add value to the team.

Coach A further added how engaging in the reflective process ultimately proved beneficial in increasing his self-awareness and his awareness of his players' needs:

I like the guided feedback process as it provides useful information and helps me reflect. I know myself better now in coaching the team and understanding players' needs and concerns. When the players commented that they may need more strength and conditioning training sessions to build toughness, I reflected and looked for solutions.

One player said how he believes the survey was a worthy initiative that allowed players to provide feedback for their coach to reflect on:

I think the good thing is that it [survey] forces everyone to speak out because sometimes, players may just keep quiet even though they may have their opinions about the coach. This is a confidential report that allows everyone to give their opinions and pushes the coach to think and act. (P10)

One player discussed how he was satisfied with the changes in Coach A's approach, appreciating how he delivered instructions, communicated expectations, and planned training: "My coach was very clear about his aim for technical skills development after the pre-season meeting. Every drill that he planned had a specific theme. He communicated well and the players understood what they had to do" (P2). Another player deemed that Coach A effectively promoted the development of players' psychological health and well-being:

The coach is really concerned about us in many aspects such as skills, emotion, and welfare. He shared his experiences with us. He spent a lot of his time in planning and teaching us. He respected us and would bother to find out what went wrong if he noticed that something is not right with us. He is always concerned about us. (P5)

The players discussed how ultimately, they were supportive of the feedback process their coach had engaged in and were appreciative that their coach had used the findings of the survey to improve his coaching practice: "I think it makes coach more proactive and there is a greater incentive to try to improve. He knows that there is a survey and naturally, it will keep reminding him to reflect on his coaching" (P6).

Although the learning facilitator's strategies were not as useful as they could have been, Coach B did recognize the advantages of using the questionnaire data (players' feedback) as an essential source of information to reflect and work toward improving his coaching practice: "The CBS-S report is useful to me... now I know where I stand and how my players perceived my coaching. It helps to decide what areas to work on in order to help my players improve and perform."

Although Coach B indicated using the questionnaire data to improve his coaching, the players discussed how they believe minimal coaching adjustments were made during the season. The players reported that they perceived the coach-athletes relationship as being poor, mainly due to the lack of communication between both parties. One player highlighted during the postseason interview how Coach B made minimal efforts to get to know his players as people and demonstrated minimal interest or dedication beyond his technical/tactical duties as a coach:

I think he should work on off court bonding and communication with the players. The rapport between us is not that good. We talk a lot among ourselves after training but not with the coach. He usually leaves immediately after training. I don't think he is aware of our problems [personal or team]! (P8)

Another player also discussed what she perceived to be Coach B's deliberate decision to maintain a certain distance from the players: "I feel that the coach is here for 'official business' and that his duties are done after the training sessions have ended" (P9). Some players also commented on their coach's inability to transfer his teachings into game strategies. On this issue, two players stated: "I think the way he coaches should be improved. We spent time practising strategies during training but none of them were used during games" (P10) and "We have strategies but none of them were carried out during competition. What is the use of spending so much time practising the strategies if you do not use them...? (P9). Finally, one player's statement summarizes the apparent lack of reflection and subsequent change in Coach B's coaching practice and how it affected player learning: "I feel that I did not really learn a lot from him... He was just reinforcing what I have learned previously" (P2).

Discussion

The purpose of the current study was to conduct a guided reflection intervention for high performance basketball coaches in Singapore. As Trudel et al. (2013) have suggested, learning is both an individual and a social process, meaning that even if individuals share similar coaching roles within similar coaching contexts, they probably will prefer to learn from different types of learning situations. In this regard, a constructivist view (Moon, 1999) allows us to see learning and more particularly reflection as an idiosyncratic process that involves the

restructuring of concepts within our cognitive structure rather than simply an accumulation of knowledge. The findings of the current study revealed how the two coaches perceived the intervention very differently, with Coach A demonstrating a high level of receptiveness and Coach B demonstrating a low level of receptiveness. Such findings are consistent with past literature on reflection and further suggest that the reflective process is quite idiosyncratic; it can be embraced and serve as a powerful learning tool for some but it does not lead to the same level of benefits for all coaches (Werthner & Trudel, 2009). As Attard and Armour (2006) indicated in their case study of an early-career teacher: "reflection was not foolproof nor did it automatically lead to change in practice. However, once the habit of reflection became established, it was impossible to stop reflection" (p. 209). There are many reasons that can be used to explain the differences witnessed in the two coaches as it relates to their motivation to change as well as their openness to and understanding of the guided reflection intervention. The findings showed how Coach A was motivated and actively engaged in 'shared conversations' with the learning facilitator on themes related to the learning of positive self-talk techniques and the integration of drills that combine tactical concepts with fitness development. For Coach A, the end products of having invested in the guided reflection intervention were the identification of meaningful solutions to address his real-life coaching issues, such as successfully incorporating weight training into his players' routine. Based on the changes effected in Coach A's coaching practice, the players reported a high level of satisfaction with his work. In contrast, Coach B demonstrated low levels of motivation and only superficially engaged in the guided reflection intervention. The findings suggested how Coach B initially had intentions to improve his coaching practice but his players' responses seemed to indicate that changes did not occur, which affected his relationship with the players and contributed to their dissatisfaction with his coaching style. Our findings are consistent with the work of Cropley, Miles, and Peel (2012), indicating that motivation is a key factor needed to engage coaches in the reflective process and compel them to improve their coaching practice. As researchers have discussed, simply being aware of one's strengths and weaknesses does not lead to effective coach development (Cushion et al., 2010; Gilbert & Côté, 2013). Coaches must genuinely want to improve to effectively engage in the reflective process and must work to direct their actions at integrating new thoughts or ways of thinking into action.

Guided feedback has been shown to trigger reflection and increase coaches' awareness of their coaching behaviors (Culver & Trudel, 2006), but it does not necessarily lead to behavioral changes in coaching practices (Cushion et al., 2010; Gilbert & Côté, 2013). The results of the current study support this notion as Coach B stated being satisfied with his approach to coaching and hinted that changes may only be extrinsically motivated to please the learning facilitator. Several factors might explain such findings but given where the study took place, cultural

differences may be an important variable influencing the quality of facilitator-coach interactions (Koh et al., 2009).

In Eastern societies, such as in Singapore, younger individuals must exhibit a certain level of respect for their older counterparts and in the current study, Coach B may have been dismissive of the facilitator's guidance because he was younger. Therefore, in certain milieus, it may be prudent to ensure that learning facilitators are older than the coaches they are guiding to increase the probability of shared reflective conversations being fostered. Nonetheless, future research should examine more closely the relationships formed between coaches and learning facilitators within particular cultures and how variables such as age influence the promotion of reflective practice. Another reason why Coach B only superficially participated in the reflective process and did not address his intention to improve coach-athlete relationships (as he identified in his preseason interview) might be gender-based. At the time of the study, Coach B had 20 years of experience coaching male athletes but had only recently switched to coaching female athletes. In Singapore and elsewhere in the Eastern world, the notion of having male coaches 'foster relationships' with female athletes often remains sensitive, mainly because it might lead to potential issues if the coach is deemed to be 'too close' to the athletes. Perhaps this is one of the reasons why Coach B, intentionally or not, decided to maintain a certain 'distance' from his players and focused mainly on technical skills rather than rapport-building. Similarly, Koh and Wang (2014) found gender differences in perceived coaching behaviors among Youth Olympic Singaporean athletes. Future studies might want to examine how different gender combinations of coach and athlete affect coaching styles and ultimately coaches' approaches to the reflective process, especially in Eastern culture.

The findings of the current study provided evidence that the coaches engaged, at different levels, in various forms of reflections (i.e., reflection-on-action, retrospective-reflection-on-action) related principally to the technical aspects of their coaching practice. The focus on technical reflection might be explained because the coaches emphasized the improvement of performance outcomes, which are of great importance in high performance contexts (Irwin et al., 2004; Mallett, 2010). Further, coaches have been shown to mostly identify and reflect on everyday pragmatic coaching issues that have personal significance to them, and make adjustments to their subsequent practices (Cropley, Hanton, Miles, & Niven, 2010; Irwin et al., 2004). The structured questions provided in the coaches' reflective journals were intended to stimulate reflection but we did not find any evidence that the coaches engaged in critical reflection. Perhaps there was a lack of critical reflection due to the sources of information used to incite reflection (i.e., perceived coaching behaviors by the players), compelling the coaches to focus on immediate matters aimed at enhancing their athletes' performance. Further, the intervention occurred while the two teams were preparing for a major

international competition and as such, improving players' technical skills was probably seen as the most important task for the coaches at that time. They might have engaged in more critical reflection had the intervention transpired in the off-season. Cushion et al. (2010) argued that reflection might be viewed on a continuum from shallow description to deep critical reflection. Having access to learning facilitators who can guide coaches in the reflective process might make it easier for coaches to advance on the reflection continuum by developing the skills necessary to engage in critical reflection. To further promote reflection in coaches, national sport federations and programs developers should consider establishing a system to identify and develop interested coaches to become coach developers/facilitators. In this regard, the International Sports Coaching Framework proposed by the International Council of Coaching Excellence (ICCE), Association of Summer Olympic International Federations (ASOIF), and Leeds Metropolitan University (LMU) (ICCE, ASOIF, & LMU, 2013) might serve as a common reference point to address this concern internationally. Although learning facilitators are definitely of value, networks such as 'learning communities' must also be further promoted as a potential source of reflection. Optimally, such learning communities should provide a forum for coaches with similar backgrounds and experiences to get together to discuss, reflect, and construct solutions to their coaching issues to further promote meaningful in-depth coach reflection (Culver, Trudel, & Werthner, 2009; Gilbert et al., 2009).

Armour (2010) suggested that the reflective process must be situated in coaches' actual practice and driven by athletes' learning needs. The approach used in the current study to employ athletes' feedback as a source to guide reflection represents an important contribution to the literature (Mallett & Côté, 2006). Given that the main aim of high performance coaches is to improve athlete performance (Lyle, 2002; Mallett, 2010), providing the coaches with access to formalized feedback from their athletes represented an important opportunity for them to reflect on ways to optimize their approaches to coaching, in hopes of improving technical, tactical, and mental skills. The results of the current study offer some support for the efficacy of using such athlete data to stimulate reflection and help coaches come up with coaching plans that help resolve authentic coaching issues. However, our findings also demonstrate that the manner by which coaches perceive athlete data are a key factor, as the data can be understood as a measure of 'control' over coaches on the part of athletes who have varying agendas based on their position on the team. Nonetheless, when positive outcomes occur due to coaching changes inspired through reflection, coaches might be compelled to reflect even more and at deeper levels.

Although only two high performance basketball coaches took part in the current study, the findings provide some empirical evidence on how a guided reflection intervention can be used to expose coaches to internal learning situations (Werthner & Trudel, 2006). The

intervention focused on attempting to enhance coaches' reflection, based on the principle that learning is not simply a process of accumulating knowledge but also a process of restructuring one's existing knowledge (Moon, 1999). Our findings provide support for the notion that learning is idiosyncratic in nature, with our two coaches experiencing the intervention in vastly different ways, even if they worked essentially within the same coaching context (Werthner & Trudel, 2009). It is therefore important for researchers, national sport federations, and coaches to work together to conceive learning strategies that are sensitive to coaches' needs and prior experiences in sport and in life.

Several limitations of the current study should be acknowledged. First, only two high performance basketball coaches from Singapore and their players took part in the current study, which limits the potential to generalize the results to other sporting contexts and societies. Second, the reflective process with Coach B showed very limited success. Personality traits, age, or credibility levels might be used to explain the lack of success attained but such factors were not examined in the current study. Moreover, during the current study, Coach B was undertaking his first season coaching females. Adapting to such a change might have influenced his receptiveness to engaging in reflection and athletes' response to his coaching. Future research efforts should consider gender and coaching preferences between the athletes and coaches, as well as appropriately matching learning facilitators with coaches to optimize the reflective process.

Practical Implications

Receiving feedback from learning facilitators who can structure the reflective process has the potential to enhance high performance coaches' learning and subsequently contribute to improved coaching practice. Based on the findings of the current study and the LF's field experiences, the following recommendations are proposed to help coaches use reflection as an effective learning tool. First, it proved quite useful (in the case of Coach A) to use CBS-S data to formalize the players' feedback, which represented an important source of information to stimulate reflection. National Federations, coaches, and practitioners are encouraged to develop similar types of tools to gather athletes' feedback and use it to facilitate internal learning situations. Coaches who are open to self-improvement can use this information to tailor their coaching practice according to their athletes' needs, which ultimately can enhance the coach-athletes relationship as well as athletic performance. Second, to promote meaningful reflection, coaches should seek involvement in coaching support networks (i.e., face-to-face or online) that allow them to connect with other coaches. As the LF's work with Coach A indicated, when

a coach is motivated to improve and embraces support by actively engaging in 'shared conversations', meaningful learning is likely to occur (Gallimore et al., 2014). Nonetheless, before making decisions to work with coaches, LFs should assess coaches' profiles (e.g., traits, motives, age, life narrative) to ensure both parties have compatible approaches to learning. Such information is valuable to optimize reflective practices. Once partnerships are developed and formed, LFs must constantly work to nurture solid working relationships that are cultivated through shared trust/respect and genuine intentions to reflect. Finally, it is essential to point out that one of the lessons highlighted in the current study is that coaches are ultimately responsible for their own learning. As the name suggests, LFs can "facilitate" coaches' learning but not impose it and this notion was evidenced clearly through the divergent learning dispositions of Coaches A and B. Moving forward, all coaches, regardless of their level of experience or coaching context, must realize that they have to "invest in themselves" to ultimately optimize their athletes' development. By taking time to invest in their own performance (through reflection and other means) and not just their athletes' performance, coaches can offer the best of themselves to their athletes.

Conclusion

Guided reflective practice as a preferred internal learning situation for coaches is promising (Gallimore et al. 2014; Trudel et al., 2013). The results of the current study demonstrated that the support of a learning facilitator can foster reflection, increase coaches' self-awareness, and lead to changes in coaching practice. However, the coaches focused their reflections mainly on the technical and tactical aspects of basketball and no evidence was found of the coaches engaging in critical reflection (Gilbert & Trudel, 2013). Moving forward, more evidence-based research is needed to demonstrate the effectiveness and utility of reflective practice to promote coach's learning and improve practice (Huntley et al., 2014). Further, more research is needed to appraise if learning facilitators can help coaches take a step back and reflect critically by getting them to genuinely question their thought-processes. As Lyle suggested (2002), coaching is a very complex activity. Hence, it is essential to take into consideration how we can help coaches reflect and reorganize the knowledge already integrated in their cognitive structure (Werthner & Trudel, 2009).

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