

Coaches' experiences of Game Sense: opportunities and challenges

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This paper draws on a series of interviews conducted in 2002 with practising Australian coaches working with an Australian variant of TGfU, Game Sense. It examines their experiences of Game Sense in a range of sports played from introductory, grassroots levels to sport played at the most elite levels. The views of the coaches in the study lend support to recent literature on tactical approaches to teaching/coaching sport indicating the propensity for tactical approaches such as Game Sense to provide opportunities for coaches to develop more complete players than is possible with technique-focused approaches. The coaches' experiences also suggest that there is a range of challenges involved in the implementation of Game Sense.

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Introduction

Over the past decade there has been a considerable expansion in research and writing on tactical approaches to teaching games such as Teaching Games for Understanding (TGfU) as an alternative to 'traditional' approaches that focus on the development of technique. Despite this interest TGfU has yet to make a significant impact upon physical education teaching. As Kirk and Claxton (1999) note, despite the rich potential that TGfU offers to address so many of the problems facing teachers of physical education and sport in schools, it is disappointing that it continues to meet resistance. In response to this concern a number of studies have sought to explore the range of issues involved in the development of TGfU in schools by focusing on teachers and pre-service teachers (for example see, Butler, 1996; Light, 2002). The growth in interest in TGfU evident within the physical education literature has been accompanied by increased interest in the application of tactical approaches to coaching (for example see, den Duyn, 1997; Launder, 2001; Wein, 2001) and the emer-

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gence of TGfU variants such as Play Practice (Lauder, 2001) and Game Sense (den Duyn, 1997). There has, however, been little attention paid to identifying and examining the range of issues shaping the implementation and development of tactical or game-based approaches to coaching. Certainly, with the exception of Kidman's (2001) interviews with New Zealand coaches, there remains a dearth of research that examines the experiences of practising coaches working with tactical approaches.

Although TGfU has been slow to impact significantly upon the teaching of games in Australian schools Game Sense has made an impact upon coaching from grassroots to elite level sport. Game Sense is an Australian variation of TGfU developed by the Australian Sports Commission in collaboration with Rod Thorpe and Australian coaches in the mid-1990s. It is a slightly less structured version of TGfU and is discussed in more detail in the following section. Drawing on a series of interviews with Australian coaches, this paper examines their experiences of working with a Game Sense approach to explore their reasons for adopting it and their experiences of putting it into practice. It provides insight into some of the practical issues that arise in the development of Game Sense coaching to identify a number of opportunities that the coaches in this study feel it offers and some of the challenges involved in its implementation.

The Game Sense approach

Much of the debate on tactical approaches to coaching and teaching has contrasted a tactical model with a 'traditional' technique-focused model (for example see, Turner & Martinek, 1992). Few, however, would suggest that there is a clear-cut dichotomy in practice between the two models. As coaches in this study suggest, there is often considerable overlap. Indeed, much of what is promoted in the Game Sense approach would likely be seen as basic 'good coaching' by many coaches. There are, however, fundamental differences between the conceptions of coaching and learning that underpin these two instructional models. The traditional approach is based on analysing skills and technique seen as being fundamental to successful play. These techniques are practised and developed until they are performed well enough to enable the game to be played. Technical approaches to coaching are based on the assumption that technique must be developed before playing the game (Blomquist *et al.*, 2001). Conversely, Game Sense contextualizes learning within games or game-like situations. It focuses on the game and not on the technique. Bunker and Thorpe (1982) argue that too much emphasis is placed on developing physical skills, out of context, at the expense of the other dimensions of game play such as tactical understanding and decision-making. Indeed, motor skill execution is only one part of performance in games and is highly dependent upon the context within which it occurs (Blomquist *et al.*, 2001; Abernathy *et al.*, 1996). Bunker and Thorpe (1986) and others (for example, Brooker, 2000; Light & Fawns, 2003) argue that the traditional focus on specific motor responses in the form of technique fails to account for the contextual nature of games in which players constantly interpret and adapt to a dynamic physical environment.

Cushion *et al.* (2003) suggest that in the UK the rationalistic, mechanistic approach that dominates coaching emphasises the transfer of decontextualized knowledge in

coach education and de-skills coaches. They argue that such approaches are incapable of developing the intellectual competencies of independent and critical thinking skills in sport. As Turner *et al.* (2001) point out, sound coaching needs to reflect recognition that both motor skill execution and game knowledge contribute to good game performance. Research on tactical approaches to coaching such as Game Sense suggests that they offer a useful means of improving the cognitive dimensions of play without detracting from skill development (McPherson, 1999; Turner & Martinek, 1999).

The development of Game Sense in Australia

Rod Thorpe regularly visited Australia from 1994 to 1998, where he worked with the Australian Sports Commission (ASC) and Australian coaches to develop a systematic coaching approach based on the TGfU model known as Game Sense. As the coaches in this study note, many of the ideas in TGfU that Thorpe brought with him were already being used by many successful coaches in Australia. Thorpe, however, provided a systematic approach and introduced a focus on questioning. As some coaches in this study suggested, the name Game Sense was seen to have more appeal than TGfU and to distance coaches a little from physical education teachers. Kidman (2001) suggests that Game Sense is more structured than TGfU. Even though the resources developed by the ASC to support coaches provides guidance and sample questions for activities Game Sense is actually less structured than TGfU. Game Sense includes any coaching approaches that are game-based and employ questioning to stimulate thinking rather than telling players what to do. Unlike TGfU there is no Game Sense model and it is more open to flexible interpretation and this is evident in this study. The ASC's Game Sense resources include a set of Game Sense activity cards divided into the four types of games. The four categories are invasion (or territorial) games such as soccer, basketball and Australian football, striking games such as cricket and softball, net/wall games such as volleyball, tennis and squash, and target games such as golf, archery and lawn bowls (Werner & Almond, 1990). Within each category the games share much in terms of the tactical knowledge needed to play well and this is transferable across sports. The similarities between soccer and hockey are obvious but there is also much in common between, say for example, games like basketball, Australian football and rugby. The tactical similarities that these games share may not be immediately apparent but emerge when a Game Sense approach is used. There is generally little skill transfer across games even when the skill may appear quite similar, such as an overhead smash in tennis and a spike in volleyball. Game Sense, however, provides considerable scope for transfer in tactical knowledge as illustrated by Mitchell and Oslin's (1999) research on tactical transfer in net games. In addition to the game activity cards the Game Sense resource kit includes a video and a workbook aimed at providing structure for coaches taking up the Game Sense approach.

Method

Participant selection

The participants in this study were purposefully sampled and were all professional coaches or coach educators. They were identified through my own work in the

development and promotion of Game Sense within the coaching and teaching communities in the state of Victoria. This work brought me into contact with coaches who had broad experience in working with Game Sense in different settings and working at different levels of performance. Over a four-year period I established collegial relationships with all the participants but for Janet. I met Janet at a seminar on Game Sense at the Victorian Institute of Sport (VIS). I have also worked with Lance, Gary and Pam in the development of Game Sense with coaches, teachers and pre-service teachers. Through these relationships I approached each of them to take part in the study. While the size of the sample and the method through which the participants were selected limits the extent to which generalizations can be made, my relationship with the participants assisted in gaining valuable and insight into their personal experiences of Game Sense coaching.

Initially five participants, three male and two female, were selected to include experienced coaches working in a variety of sports at levels ranging from introductory, grassroots level for young children to the most elite levels of high performance sport in Australia. Following the identification of some core challenges that coaches adopting a Game Sense approach face a sixth participant was added to help provide some insight into an experienced coach's initial experiences of working with a Game Sense approach. The participants were all informed that interview data would likely be used in publications. They were also provided with a copy of the final draft of this paper prior to submission and asked to ensure they had not been misrepresented. They all agreed to having their identities made clear in the publication. Despite this the names used in this paper are all pseudonyms used to protect their anonymity due to concerns with the possibility of ethical issues arising from players or parents reading the publication.

The participants

Lance had been coaching for 30 years at the time of this study and works in coach education at a government-funded organization promoting sport at the grass roots level. Gary has been coaching for over twenty-five years and works in coach development at the Victorian Soccer Federation (VSF). The VSF moved from a technique-based coaching approach to a Game Sense approach in 1999. Steven holds a senior position in the development of programs at the Victorian Institute of Sport (VIS) and has thirty years of coaching experience. The VIS forms part of Australia's highly successful National Elite Sports Council (NESC) network that embraces the Australian Institute of Sport (AIS). Kathy Freeman, Olympic 400 metres gold medallist in 2000, was a scholarship holder of the VIS. Janet has been coaching for fifteen years and is a professional netball coach working at the elite level and provides an example of a coach who is guided by the Game Sense approach but sees a place for 'traditional' technical work in her coaching. Glenda works in the Sport Education section at the Australian Sports Commission and has played an important role in the development and dissemination of Game Sense. While the other coaches interviewed in this study have considerable experience in working with Game Sense, softball

coach, Pam had only begun to experiment with it during 2002. As an experienced coach of eighteen years, of which eight were at elite level, her initial experiences of working a Game Sense approach into her coaching provide some insight into the challenges that coaches may face in moving from technique-based coaching to Game Sense coaching.

Data collection and analysis

A constant-comparative approach was used to analyse data. Initial interviews were structured and data generated were analysed to identify common themes and ideas that were explored through subsequent, semi-structured, conversational interviews. The initial interviews were structured around a framework of eight focus questions. Prior to the interviews I told the coaches that they were free to expand on their answers as much as they felt inclined to and were encouraged to do so with further questioning that built on the focus question. I began by asking the coaches to outline their coaching backgrounds before moving on to ask seven more focus questions aimed at pursuing what the coaches saw as the learning possibilities that Game Sense might offer and gaining some insight into the issues that might arise when coaches embark on the implementation of an innovative approach. After asking for an outline of coaching careers the questions asked the coaches reasons for adopting a Game Sense approach, the involvement of their organizations in the adoption of Game Sense, the impact that they felt Game Sense had made on coaching in Australia, their own initial reactions to Game Sense, the reactions of coaches in general when first exposed to Game Sense, the benefits that they felt Game Sense offered coaches and players and the problems involved with their own adoption of Game Sense and the issues that typically arise when coaches take on a Game Sense approach.

I conducted and recorded all interviews on a one-to-one basis. The initial interviews were of ninety-minute duration but subsequent interviews that were shorter and conversational in nature were used to explore emerging themes and test developing, substantive theory. These interviews varied in duration in order to fit them into the participants' busy work schedules. Interviews were conducted at the participants' place of work or in appropriate places nearby when conducted after coaching.

Results and discussion

Analysis of the interview data identified four common strengths of Game Sense that the coaches in this study felt offered increased opportunities for learning and player development and three challenges involved in its implementation.

The opportunities

The following section identifies and discusses four major strengths of Game Sense coaching that emerged from the interviews conducted with coaches in this study.

Working off the ball. In most invasion games only one player at a time is in contact with the ball yet the other players on the offensive team need to be actively engaged in the game. Interviews with the coaches in this study suggests that coaches in invasion games need training approaches that can develop this play off the ball as Steven explains:

[Good training] just comes back to the fundamentals. Not the fundamental skills but the fundamentals of participation and successful play in the game that needs the athlete to be thinking. Not just when in possession of the ball. Game Sense provides opportunities for enjoyment, for maximising activity, and creativity. They [players] develop an understanding of the tactics of play whether they are on the ball or not. [Game Sense training] provides opportunity for creativity and innovation in athletes no matter where they are on the field or what sport they play. These are the things an athlete needs to develop.

In the initial interview with Gary he outlined how important it is to develop play off the ball and how a technique-focused approach is limited in its propensity to develop this aspect of play:

In a ninety-minute game the ball's in play for say sixty minutes and within a ninety-minute game of soccer each player averages at the most three minutes touching the ball. So what are they doing for the rest of the game? What are they doing for the other fifty-seven minutes? They are running around making decisions. Three mins of technique and fifty-seven minutes of the where when and how? Where do I run, when do I run and how do I run? Where meaning I need to see where the ball is, where the players are—when meaning do I wait for the ball to be kicked, do I go too early or too late and how meaning do I go quickly, slowly or do I go sideways, do I pretend to run there and go there?

Gary asks if players in soccer are in possession of the ball for an average of less than three minutes in a game why do coaches continue to drill ball skills and overlook player movement off the ball? In elite level netball Janet suggested that Game Sense is helpful in developing decision-making on and off the ball:

At the top level there is more use of (Game Sense) and the AIS (Australian Institute of Sport) are doing some decision-making work predicting what's going to happen and that sort of thing. The Kestrels, one of our national league teams, do a lot of it. It's slowly starting to take off ... It really pushes the envelope in decision-making and educates the athletes in making decisions: with the ball and without it.

The notion of training players to work off the ball helps to illustrate how efficient coaching may need to address, not only ball skills, but also perception and decision-making off the ball. All the players in a team may focus on the ball during play and adjust their field position in relation to its movement but typically come into contact with it for only brief periods. Player movement off the ball in attack, as they create and find space, is therefore equally, if not more, important for the team's success than the manipulation of the ball by the player in possession. Research indicates that tactical approaches can achieve significant improvements in player movement off the ball (Mitchell *et al.*, 1995, 1997). The coaches in this study suggest that Game Sense offers a means through which coaches can assist in the development of perceptual capacities and decision-making ability. While such capacities and enacted understandings cannot be directly 'taught' by the coach,

their development can be fostered by placing the player in appropriate contexts and by guiding learning through well-planned questioning (Light & Fawns, 2003).

Transfer from training to the game. Lance suggests that it can be frustrating for players and coaches to see little evidence of what appears to be good training during the week having improved game performance on the weekend. He suggests that a lack of transfer from training to the game is the result of not training athletes within contexts that are close enough to game conditions:

One of the difficulties in coaching has been that often we practise a technique as a player but don't see the transfer into the game. The players don't see the link. They just do the practice because the coach says and then they get into the game and, well now I'm playing a game and there's no link. It can be frustrating for the coach because we say I don't see any evidence in the game of what were just practising.

Most of the coaches in this study agreed that, to be effective in improving game performance, training needed to replicate game conditions. Lance suggests that Game Sense addresses this problem of a lack of transfer by placing all learning and development within game-like environments that are structured by the coach to develop particular skills and understanding:

At the elite level, it allows the coach to actually replicate the game, to put players in game-like situations more often than in an actual game. Coaches don't make players, there are attributes that a player will have and the coach's role is to accelerate the learning process. The coach allows the players to get a lot a particular experience by constructing the environment. If necessary the coach then throws in challenges and crumbs of information to stimulate some thought and we get better thinking players.

It could also be argued that, at the elite level, players have the experience and the skill level to allow for the replication of game conditions. Indeed, Janet suggests that, while a Game Sense approach provides for the development of high level decision-making the players need an appropriate 'skill base' for this type of training. During his work as a physical education teacher and then a professional coach Steven had become concerned with what he describes as a lack of transfer from training to the game in both school and club sport settings. He suggests that technique-focused coaching often produces players who seem to train for practice sessions more than for games. His concern with this problem led him to search for training methods that could produce better game players and his exposure to Game Sense helped him better conceptualize what he had been doing in his own coaching and to better structure his coaching approach:

I gradually became aware that there were athletes who train to train. They were good at training but don't train to compete irrespective of the level at which they are competing so it applies to entry level and high performance level athletes. At the VIS we are very much into the preparation of high performance athletes. And we are very much attuned to the Game Sense approach.

Like the other coaches in this study Janet felt that many of the ideas Thorpe brought with him to Australia were already being used by top-level coaches. She said that she had incorporated a Game Sense approach into her coaching well before she had ever heard of it. Despite initial difficulties she had worked Game Sense into her coaching

while maintaining work on skills. When asked to identify the main strength of Game Sense Janet nominated its propensity to reproduce game conditions and the pressures that players experience in games:

I really haven't been introduced to Game Sense. It's just something that I've developed in my own coaching style over time by incorporating snippets of what happens in a match into training to give the athletes options for decision-making under game conditions. It really educates the athletes in making decisions. But they need a good skill base so that you can replicate the conditions of a match.

In identifying the need to employ coaching that results in a 'transfer' of performance from training to the game the coaches interviewed highlighted the complexity of games and the need for players to develop an understanding of their environment as well as the development of skills within contexts that are game-like. Not only do players in all games need to know how to perform techniques, they also need to understand where these skills fit into the game and understand the tactical dimensions of the game before they are able to perform 'intelligent action' (Light & Fawns, 2001). The embodied understanding of the game that distinguishes good players is such an elusive quality that many coaches dismiss it as something the player is born with and which cannot be taught. To some extent this is true. As Bourdieu (1990) suggests, this 'sense of the game' is indeed embedded in the body over a person's life. It is, however, something that is learnt. It is learnt, not only through sport, but also through a range of physical experience within particular cultural and social contexts. This suggests that coaches might well consider the different knowledge and dispositions that players bring to training and the ways in which their development is shaped by the larger social and cultural environment.

Creating independent players. Former All Blacks rugby coach Wayne Smith argues that there is a need for player empowerment in rugby at the elite level and adopted a Game Sense approach to develop this in his players (Kidman, 2001). In sports such as rugby, soccer and field hockey where the coach has little opportunity to make decisions during the game, players must be independent decision-makers. Gary, Steven and Lance felt that good coaching should produce players who, once on the field, do not need to look to the coach for advice.

Lance and Glenda both suggest that if a coach has to shout instructions from the sideline then he or she has not empowered his or her players to make their own decisions. Gary explains that one of the aims of coaching at all levels of soccer are to produce players who are independent decision-makers on the field and who do not have to rely on the coach during the game:

We want to produce players who are independent . . . where they don't worry if they look up and the coach is not there. It shouldn't make any difference . . . I hate in games when something happens and the players look across to the coach or bench and ask what they should do. We want them to make the decision.

Players need to be empowered in training to be independent decision-makers on the field (Kidman, 2001) and research on TGfU indicates that it can improve player decision-making (for example, Mitchell *et al.*, 1997). They must know the game

and be able to make decisions for themselves and not be looking to the coach in games. In agreement with other coaches in this study Glenda suggests that Game Sense develops player autonomy by placing them in situations where they are required to make decisions independent of the coach:

At the grassroots level Game Sense is inclusive and helps make training fun for children.
At the elite level it helps players to make quick decisions and promotes self-reliance. This means that players don't constantly need the coach to tell them what to do.

The need for player independence and empowerment is clear in games such as rugby, soccer and field hockey. It may, however, be less important for coaches in other sports where there is more coach involvement in decision-making during the game. Coaches in games such as American football may well discourage player independence for fear that it might interfere with the tightly planned plays used and directed by coaches.

So many of the decisions made in games are made in a split second and appear as habitual responses in which there is no conscious thinking. This is what is referred to in research on tactical approaches to teaching/coaching as procedural knowledge (for example, Thomas & Thomas, 1994) or 'enacted knowledge' (Light & Fawns, 2001). Research on TGfU indicates that declarative knowledge, i.e. that which can be articulated, precedes the development of procedural or enacted knowledge. That is to say that, when using a Game Sense approach, players typically develop an ability to articulate game knowledge before they can actually demonstrate it in a game. Given the importance of learning in schools as a process, the articulation and expression of ideas and the social interaction from which they emerge forms a valuable aspect of the broad range of learning through movement that can take place through TGfU/Game Sense teaching in physical education programs. Coaches, however, typically tend to be more concerned with improvements in game performance. As Bunker and Thorpe (1982) suggest, complete learning has not taken place until understanding is demonstrated in game play. The questioning that is such a feature of TGfU/Game Sense needs to result in knowledge as action to be seen as successful (Light & Fawns, 2003). This enacted game knowledge involves a particular form of cognition. As the work of Bourdieu (1977, 1990) suggests, such responses involve a form of cognition that is embodied through long years of engagement in the sport. It can appear instinctive but it is behaviour that is learned at a subconscious level and embodied over time. It cannot therefore, be directly 'taught' to players by a coach. As the experiences of coaches in this study suggest, the development of such embodied knowledge can, however, be encouraged through providing players with game-like training activities in which they must constantly solve the range of problems that typically arise in games (Grehaigne *et al.*, 1999; Light & Fawns, 2001).

Player motivation. Steven suggests that enjoyment is important in the quest for excellence at the highest levels of sport where personal satisfaction is the prime motivation. He identifies the propensity of Game Sense to motivate players during training as a particular strength. He feels that the Game Sense approach offers coaches a means

through which they can challenge their athletes, encourage creativity and stimulate them. By challenging players and giving them a degree of autonomy in training Steven suggests that it 'lights up the sport' for them and keeps them motivated. Steven and Lance both argue that lining up for repetitive technical drills does not motivate players sufficiently to train with the enthusiasm that is required for improvement in game performance. In the following quote from Steven he explains why he feels that it is important to empower and challenge players at the elite level:

Game Sense can help athletes develop a real empathy with their sport, a real understanding, a real feel for it, a real love, and a real passion. They get to feel the sport, they get to smell the sport and enjoy the sport. Without the enjoyment and commitment levels, you're not going to achieve excellence. I think a lot are disadvantaged by a skill-based approach. It doesn't light the sport up for them and it doesn't develop skills that they can apply in action.

Pam's decision to experiment with a game Sense approach in softball was driven largely by the way in which game-based coaching provided motivation to players through the increased enjoyment that it stimulated. Indeed this was a very common theme in all the coaches' interviews.

Glenda said that coach responses to Game Sense across Australia had been 'overwhelmingly positive'. She suggested that, at an introductory level, it could provide for including a wide range of abilities and that, for children and young people, 'it was fun'. Lance suggests that Game Sense is particularly useful for motivating children and young players. He feels that, while the naturally gifted players will succeed whether a technique-focused or game-based approach is used Game Sense provides important motivation for most children by 'giving the game back to the kids':

With a technical approach the responsibility for motivation is thrown back on the teacher and you have to motivate them to stand in lines and work on technique whereas when you give them the game back you don't have to motivate them . . . The closer training is to the game the more motivation there is. The further you get from the game the less they are motivated. Actual games provide low repetition and high motivation whereas drills offer high repetition and low motivation. Game Sense comes in here to offer increased repetition but staying close enough to the game to provide motivation.

The views of the coaches in this study on the opportunities offered by Game Sense provide support for Bunker and Thorpe's (1986) contention that an understanding approach can produce independent players, transfer success in training to the game and stimulate player motivation.

The challenges

The challenges identified here emerged from analysis of the same interview data from which the opportunities identified in the previous section did.

Coach/player power relations. Adopting a Game Sense approach involves a very significant change in the position of the coach and in the power relationships between coach and players. As Lance suggests, the Game Sense coach sets the environment to maximize learning and has a good idea of what he/she expects the

players to learn but does not always determine exactly what will be learnt. Lance suggests that the Game Sense coach encourages players to focus on particular aspects of play through asking questions but needs to 'step back and let them learn'. He says that the emphasis placed on asking rather than telling places responsibility back on the players for their own learning and involves them intellectually in their training. As Gary suggests, many coaches may see this less authoritative position as contradicting what they, and others, see as good coaching:

You have coaches who think that you have to remonstrate, scream and shout, get in people's faces ... For many coaches they think that if I don't stand there and rant and rave then I'm not looked upon as a coach who is doing a good job.

Mosston and Ashworth (1990) suggest that in physical education student-centred teaching involves a shift in decision-making from the teacher to the students. In the same way Game Sense coaching involves a process in which much of the decision-making that would traditionally be done by the coach is shifted to the players. In her dealings with a wide range of coaches Glenda has noticed how the different position of the coach and the use of modified games can cause problems for some coaches. She suggests that coaches are often confused with the mix of tactical and skill learning in Game Sense:

Another issue for some people is knowing how to teach within the Game Sense concept. There have been comments that Game Sense is just about 'playing games all the time' without any real learning going on. Some people struggle with when to step back and let players develop understanding and when to step in and teach the techniques of the game, in amongst the tactical learning that is going on.

Although Gary had been using Game Sense for four years at the time of this research he was still sometimes unsure where to position himself in relation to the players:

I still have some problems. There are certain techniques that I feel have to be highlighted. I don't go into the heavily technique-driven program that I used to use but I still believe that players need to understand certain components of a technical movement. Then, sometimes I tell myself just back away and give them a little information and let them find out for themselves. So I have to keep on monitoring my coaching because for twenty-five years I have been a technique-driven coach.

Several coaches in this study suggested that the coach is just as important as in the traditional approach but is less visible. The focus in Game Sense is on the players not the coach. Players used to a directive technical approach may also have expectations of the coach that differ from the role he/she typically assumes in Game Sense. Many coaches, and particularly those working at elite levels, may also feel uncomfortable or even threatened by this change in focus as Lance explains:

The technical approach suits some players and some coaches. However, a lot of coaches are control freaks and letting players take control and make their own decisions can be quite threatening. With the technical approach the coach can be a lot more involved during the session because they're directing what's going on. They are more hands on. For the Game Sense coach it's the preparation and observation that come to the fore and your ability to manipulate the environment but not necessarily manipulate the players. And that's a challenge for all coaches.

Pressure on coaches working at elite levels is also likely to feel anxious about how they appear. Gary suggests that club committees and the parents of children playing in clubs often have a well established perception of a committed coach that is at odds with the behaviour of a Game Sense coach:

This (authoritarian) culture means that there are times when I have been sitting there and people have said it looks as though you're not interested in the game . . . If you're in the coaches' box you're almost obliged to jump up and down—that's the perception of what coaching is about.

Glenda has been involved in the development and promotion of Game Sense by the ASC and confirmed the difficulty that many coaches had in letting go of power. As she noted, coaches typically feel that they are supposed to 'know it all':

Game Sense can be somewhat threatening to coaches who are used to the traditional role, where the coach is supposed to 'know it all'. Game sense encourages players to find answers for themselves, rather than the coach being the 'font of all knowledge', which can be a difficult concept for some people.

Steven says that Game Sense can 'light up the game' for players at all levels and encourage the sort of creativity and sense of the games that most coaches would value. Yet, at the same time, this marked departure from what the coaches interviewed referred to as 'traditional' practice creates its own set of problems for coaches. Feelings of empowerment for players might well be matched by a coach feeling disempowered as he/she 'steps back' from training to let the players sort out their problems. As a relatively recent 'convert' to Game Sense, Gary said that he sometimes struggles with getting the right balance of tactical and technical development and was often unsure when to 'step in'. Cushion *et al.* (2003) argue that dominant approaches to coaching emphasize skill, technique and tactical understanding as uncontested knowledge that is determined and passed down to coaches from above. They suggest that this process is tied into the reproduction of existing power relations and the maintenance of control. In the same way, a view of the coach as 'the font of all knowledge' who passes it on to his or her players produces an inequality in power relations that acts against empowering players on the field as well as during training.

The aesthetics of training. All of the coaches in this study made comment on the difference in appearance between a typical technique-focused training session and a Game Sense session. Most of them explained how this is a logical result of setting up environments that more resemble games. The problems identified by several coaches that arises from this are related to a view of what effective training looks like that is at odds with the principles underpinning Game Sense. In the following quote Lance explains how the often-chaotic appearance of Game Sense training and the learning that takes place may be misinterpreted:

Drills and a technique approach can appear very ordered and very well organized and it looks good to parents. It looks like their kids are learning something whereas the Game Sense approach can appear chaotic. But the game itself is often chaotic. It's organised chaos, the game is not ordered and organised. You go out and the game is chaotic and they're the conditions you have to train for. You have to replicate the game in training and develop players who can make sense of the chaos.

Light and Fawns (2001) argue that approaches to teaching and learning that are neat and well-ordered attempt to reduce learning to a simple and linear process. As appealing as they are to those unfamiliar with the realities of learning, such approaches cannot account for the complexity of learning. As Gary argues, standing players in neat lines running along predetermined lines and drilling a particular passing technique may look good to the club administration or parents of junior players but does not lead to better game performances. Steven suggests that, in the case of junior sport coaching, 'Each kid is unique, yet the skill-based approach treats them like one size fits all. You've got to provide opportunities, stimulate them, help them create.'

Learning in Game Sense training takes time and is often not readily apparent to the observer who is unfamiliar with Game Sense as Gary explains for soccer:

... if you want to impress the committee then set up drills because its all a pre-worked out plan. Run here knock it in there, run around the back and join that group there. The committee will look at you and say 'he's pretty good, the players are moving along, it looks good'. If you want to do Game Sense it might look like a shambles. Stop start stop, everybody running about, a lot of questioning and it can be untidy. The drills and activities probably look good but for long term benefit and understanding of the game we have to go down the Game Sense way.

Game Sense training is typically less ordered than 'skills drills' and is comparatively chaotic because it more resembles the game. On the other hand Steven feels that this sometimes chaotic environment has the potential to produce better players:

There's always going to be an element of chaos but out of the disorganisation comes a high level of performance. If you keep closing things down and correcting things, you shut down the athlete and the teams don't develop. The control mentality breeds mediocrity. You've got to unleash the true talents of the athlete.

The concern that coaches might have with a dominant perception of what good coaching is identified here by Lance, Gary and Steven suggests that many coaches may be concerned with observers' misinterpretations of their coaching as just 'rolling out the ball'. Just as the stigma of being seen as a 'ball roller' seems to have concerned many PETE educators in the USA in the past it may also be a factor in limiting the uptake of Game Sense among coaches.

Time constraints. Pam liked the ways in which Game Sense provided increased motivation for players but was worried with the extra time that this took in getting coaches through all the requirements of the introductory, level one, coaching course in softball. She felt that softball was a skill-intensive sport and that to develop the ability to coach the basic skills needed in a level one coaching course, a Game Sense approach required too much time. A directive from above in the national organization had also tested her initial enthusiasm for Game Sense. In response to a drop in performance of the national team in 2002 a decision had been made to concentrate more on basic skills. Within this context Pam felt that developing a Game Sense approach at state level would be difficult.

Coaches in Kidman's (2001) study on empowerment approaches to coaching in New Zealand also identified the increased time needed as a problem. Junior sport

coaches Hugh Galvan and Paul McKay noted how the extra time taken to develop players with tactical approaches such as Game Sense presented problems with players and parents who wanted to see immediate results and how the pressure for results can tempt coaches to find 'quick fix' solutions (Kidman, 2001). All coaches in this study confirmed that a Games Sense approach takes longer than technical approaches to get results but felt that it achieves desirable long-term results. Gary and Lance both identified problems that can arise from tensions between the longer time that Game Sense can often take to show improvement in team performance and demands by committees or parents for instant results in competitions. Lance suggests that this might be something that the coach should outline to those concerned with the team's progress:

You are not giving specific instructions and often don't get immediate improvement that is visible, and easily recognisable to parents. But it's a case of I cannot teach you, I can only help you learn. I think it's important for the coach to outline these things if they are concerned.

The coaches in this study suggested that Game Sense involves a long term learning process and can be seen as an investment in the players for the future. Janet outlined how she has the benefit of working what is explicitly seen as a development program in netball:

There is pressure to win and get results quickly but I am lucky because there is recognition that we have a development program here and it takes time. Here winning is not everything and we take into account the long-term benefits for the athletes. We develop athletes over 3–4 years and get excellent results. There is more pressure on other clubs where team results matter more than the athlete's development so they don't have the same time to develop athletes.

Unlike most elite level coaches in her sport Janet has time to develop her athletes free of the immediate pressure to win each week that is evident in most clubs and which can operate to discourage coaches from adopting a Game Sense approach. As discussed earlier, parents and committee members may misinterpret the behaviour of the Games Sense coach and see them as not working hard enough. Contrary to this perception, Gary argues that the Game Sense approach demands more work and time from the coach but is worth the time and effort as understanding begins to develop before him or her:

To do a Game Sense approach initially takes a lot more work, but once you've got it going then it starts to flow. Sometimes for 5–10 minutes it can be all disjointed and it's not quite working, but then suddenly it clicks. When I'm coaching this way I've set the environment. I've got the players working well and I stand back applauding, saying, and 'guys; brilliant, well done.' It's a positive environment. That is one of the keys to successful Game Sense coaching.

Conclusion

While the sample of coaches interviewed for this study limits its scope for generalization it does provides useful insight into practising coaches' experiences of working with Game Sense. It also lends support to the claim by Cushion *et al.* (2003) that

coaching is a complex social process that has been oversimplified in the coaching literature and in coach education programs. The views and experiences of the coaches interviewed for this paper indicate that tactical approaches such as Game Sense may offer an attractive means of addressing the nature of coaching as a form of multi-variate and dynamic human interaction that cannot be reduced to the mere transmission of knowledge (Light, 2002). It lends support to the growing body of literature on the propensity of understanding/tactical approaches to produce good games players capable of successfully negotiating the fluid nature of game play by simultaneously developing their physical, cognitive and emotional capacities (for example, Kidman, 2001; Kirk & MacPhail, 2002; Light & Fawns, 2003). At the same time it identifies some challenges in the implementation and development of understanding/tactical approaches to coaching that may be constraining its development in coaching.

The experiences of the coaches in this study indicate that coaches interested in moving from a technique-focused approach to a Game Sense approach will likely face some difficulties. They need not, however, necessarily take a mutually exclusive, either/or approach. Recent writing suggests that tactical approaches such as Game Sense do not necessarily involve choosing between skills or tactics and there were differences between coaches in this study in the balance they struck between their emphasis on understanding and technique. The experiences of the coaches in this study lends support to research that suggests that adopting tactical approaches involve coaching in a way that promotes both the development of understanding and technique within game-like contexts (Turner & Martinek, 1992; McMorris, 1999; Brooker, 2000). Indeed, Grehaigne *et al.* (1999) suggest that adopting a tactical approach does not necessarily mean that there is no place for directive teaching. They suggest that there are times when the teaching and learning of 'technical skills' is entirely appropriate and players' tactical decisions are made 'in connection with the technical skills they can perform' (p. 171). Pam's difficulties with using Game Sense suggest that the more technical nature of striking games such as softball and cricket may warrant more of a focus on technique than in invasion games. Also, while Janet adopts a Game Sense approach to her netball coaching she maintains more of a focus on technique than the other coaches in this study and, as Stimson (1996) suggests, many coaches are likely to already have elements of Game Sense in their sessions. This, and the challenges identified in this paper, suggest that coaches interested in these ideas might well consider beginning by gradually working them into existing training programs. As Kidman (2001) notes, coaches will interpret Game Sense in different ways and will work it into their own coaching approaches and philosophy in particular ways. Indeed, there was variation between coaches' interpretations of Game Sense in this study.

While the experiences of the coaches in this study indicate that there are likely to be problems involved with the implementation of Game Sense they also suggest that it may offer coaches a means through which they can develop more complete players than 'traditional' technique-based approaches. The recent growth in interest in learning theory among physical education researchers has contributed to the development of a view of learning in the physical domain that recognises its complexity, its

multi-faceted nature and the ways in which it is shaped by its cultural and social contexts (for example see, Kirk & Macdonald, 1998; Kirk, 1999; Light & Fawns, 2001; Rovegno *et al.*, 2001). This has given rise to a wide range of research approaches that seek to provide different insights into the nature of teaching and learning in sport. Research on coaches' experiences of using tactical approaches such as Game Sense would further enrich our understanding of the complexity of learning in and through sport and the ways in which, as Steven suggests, coaches can use Game Sense to 'light up the sport' for athletes of all ages and abilities.

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