

Original Article

Elite Rugby Union Coaches; Interpretation and Use of Game Sense in New Zealand

John R. Evans

University of Sydney, Australia

Abstract: As an innovative game-based coaching approach developed in Australia, Game Sense holds significant potential for developing thinking players. However, the ways in which it challenges traditional beliefs about coaching and practices has limited its uptake in elite level sport. This study contributes toward the development of knowledge regarding the implementation of Game Sense in elite level sport by inquiring into the influence that it has had on the practice of elite level rugby coaching in New Zealand. Using a case study approach, it focuses on four elite level rugby coaches in New Zealand. Data were generated through a series of interviews and observations conducted in 2007 and 2008 in New Zealand. The participants viewed game-based training as one of a range of approaches to effective coaching. While there was some variation on an individual level, the coaches' practice was significantly aligned with Game Sense pedagogy.

Keywords: *Game Sense, coaching, coaching pedagogy, coach education*

Introduction

Rugby is New Zealand's number one sport, and it has been proffered that the mood of the country can be gauged by the success of its national team, the All Blacks (Ryan, 2008). The final of 2011 Rugby World Cup saw New Zealand defeat France by a solitary point. This triumph has emerged from a significant change in coaching practice that involves a move toward a more holistic, player-centred, Game Sense approach and can be traced back to 2004 (Kitson, 2005):

John R. Evans is a senior lecturer at the Koori Centre, University of Sydney, Australia.

Corresponding author: John R. Evans, Room 213, The Koori Centre, Old Teachers College, Building A22, University of Sydney, NSW 2006, Australia, telephone: +61(0)2 9351 7015, John.evans@sydney.edu.au

The central thrust is that New Zealand rugby reckons austere, narrow-minded, coach-dominated regimes have gone the way of the dodo. There is an increasing belief here that opponents such as the Lions and England have become over-coached and over-drilled and, as a consequence, are less able to react when things go wrong. (p. 8)

Furthermore, there was a desire to produce more intelligent players with enhanced perception and decision-making skills and a greater emphasis on empowering them. The following quote by the team's manager at the time, Darren Shand, highlights their aspirations:

We just felt, when we looked back at the 2003 and 1999 World Cups, that there was an inability on the field to make the correct decisions at the correct times. ... It became clear that we were over-coaching the players and needed to empower them to the point where they ran the game rather than us. (Kitson, 2005, p. 8)

This represents a very significant change in coaching at the most elite levels of rugby in New Zealand and one that has filtered down through all levels of rugby and one that might be seen to have been validated by the All Black's victory in the 2011 Rugby World Cup.

Game Sense

Game Sense is a variation of Teaching Games for Understanding (TGfU) developed in Australia during the 1990s (see den Duyn, 1997) through collaboration between the Australian Sports Commission, Rod Thorpe, and local coaches (Light, 2004a). Although very similar to TGfU, there are differences with the main one being that Game Sense was developed specifically for sport coaching, while TGfU was developed for physical education (Light, 2012). Many coaches were already using Thorpe's ideas such as game-based coaching to contextualize learning, but he provided a structure for this work and, most important, introduced the emphasis on questioning in place of direct instruction (Light, 2004a, 2004b). Using questions instead of telling players what they should do moved the focus of coaching from the coach to the players to make it player-centred. The key features of Game Sense are that (a) most learning is shaped and contextualized within games or game-like activities that involve competition and decision-making and (b) the coach asks players about technique and strategy to stimulate thinking and players' intellectual engagement.

Game Sense is typically used with players who know how to play the game in a basic way and who have chosen to play it. This applies to 6-year-old children in a soccer club as much as it does to elite level professional rugby union or cricket players competing at the elite level. The focus then is not on developing an overall ability to play the game but is instead more on developing particular aspects of play typically focused on the next competition match. This could arise from analysis of the previous week's match aimed at correcting mistakes or addressing weaknesses in play or could arise from strategies developed to exploit the next opponents' perceived weaknesses or to counter their strengths and is considered within an overall season-long plan. This could involve working on particular skills such as passing under pressure by constructing a context that replicates or even exaggerates the pressure under which passes must be made in competition matches or setting up particular match scenarios where particular players must make instant decisions.

The core idea of both TGfU and Game Sense is the use of a game as a context for learning along the lines of the pedagogy suggested by Dewey (1916/1997) in which learning occurs through interaction with the environment rather than by direct instruction. This is underpinned by the rejection of the separation of technique from tactical knowledge evident in the traditional focus on "skill drills," which are underpinned by the assumption that skills have to be learnt before a game is played (Light, 2008). Both theories shift attention from the coach to the player as inquiry-based, player-centred pedagogical approaches. This is achieved by taking a problem-solving approach that sees aspects of the game as being problems and challenges players to solve them while being guided by coach questioning. This encourages players to think about what they are or should be doing and places them at the centre of the learning process. This emphasis on questioning and not the use of games is the most distinctive feature of Game Sense when compared with traditional, directive instruction (Light, 2006). The pedagogy used in Game Sense and TGfU places emphasis on the coach designing the learning environment (the modified games), setting problems for the players to solve, using questioning to stimulate thinking and reflection, facilitating group discussion and collaboration, and allowing players to test and reflect upon strategies, tactics, and skills formulated to solve the problem(s).

Methodology

The study focused on rugby union coaches working at the most elite levels in New Zealand over 2007–2008. This involved coaching teams at national and provincial levels, competing in the Super 14 and Tri Nations competitions contested between Australia, New Zealand, and South Africa. Purposive sampling was used in this study, and the participants were chosen because they have particular features or characteristics, which enable detailed exploration and understanding of the central themes that the researcher wishes to study (Baumgartner & Hensley, 2006; Neuman, 2006).

Data Generation

Interviews were used to explore emerging themes generated by the real-world experiences of coaches working in a professional environment. Data were generated through three extensive one-on-one semistructured interviews and observations of the coaches conducted over a 2-year period in New Zealand. Interviews were conducted before training over a duration of 45 to 60 minutes. Interviews were digitally recorded and transcribed verbatim and returned to the participants for checking. A total of three observations were used for each coach to record their work as they interacted with players and staff in the task of coaching. The information gathered was compared with the data from the interviews. The goal of the observations was to ascertain whether coaches used Game Sense, games, or game scenarios in their sessions and to observe their interactions with players and assistant coaches. The observations noted whether coaches used questioning to engage with players and to what degree this facilitated discussion and the coproduction of new knowledge between coaches and players.

Analysis

Content analysis was used to analyse the data inductively as an approach that produces a systematic summary or overview of the data set through the reduction of information that is categorized into themes by finding relationships and grouping similar topics. As the

transcriptions were the unit of analysis, the process began with reading and rereading the interview transcripts to identify recurrent themes. These themes were then systematically identified across the data set and regrouped together into significant categories.

The following section discusses the coaches' knowledge of Game Sense and how they apply it in their professional lives. Pseudonyms have been used to protect the anonymity of the participants

Exposure to Game Sense

All the coaches were familiar with the term *Game Sense*, but Paul was the only coach to have participated in formal training. He attended a program run by Rod Thorpe in Christchurch, New Zealand. Paul had also seen a video on Game Sense shown by representatives of Sport and Recreation New Zealand (SPARC) at a conference. Paul said that the emphasis of the course was the use of games as a coaching approach and that there was a need to use questioning as part of the feedback with players: "letting the players work through the remedial activity that they need to do to get the outcome you're after and questioning" (Paul, personal communication, February 12, 2008). He pointed out that he had regular contact in recent years with a coach educator and was aware of books written on athlete-centred learning. These books had been influential in his goal to be more athlete-centred in his coaching. Walter was also aware of Rod Thorpe's work on TGfU but credited his understanding of Game Sense to his experience of playing and coaching rugby union in Italy. During this period, he was influenced by Pierre Villepreux and Andre Buonomo who introduced him to a global (game-based) approach to coaching that focused on the use of games rather than the practice of isolated skills to teach rugby union:

Now Game Sense to me was what I came across in Italy in 1986. That to me is the first experience of Game Sense I had. They didn't call it that, they called it global rugby but it was chuck the ball up and play but with little rules. I was exposed to that in '86 and the Rob Thorpe phenomenon, it came at a later date and it gave it a name and the questioning approach became a more espoused sort of theory but it's something that I'd credit Villepreux and Buonomo, those sorts of people with back in my late '80s. (Walter, personal communication, October 19, 2007)

Rodney, like Walter, had acquired his knowledge of Game Sense from experience as a player and felt that games were used to improve the skills of players because of the limited amount of time available for training in the amateur era of rugby union. It was only recently that people involved in coach education and academics had given it a name:

But we were probably already using it [Game Sense] 'cause as an amateur player, you have limited time to make headway to get the incremental gains and improve players' skill sets. No, it's only been in recent times where I've seen presenters present on this topic. Where blokes like yourself have put it into words (laughter). (Rodney, personal communication, January 6, 2008)

Arnold was not sure how he had learned about Game Sense. He did say that he had read about it and heard people, mainly other coaches, discussing the term: "I don't know. I read about it and [heard] people talking about it and stuff like that" (Arnold, personal communication, March 26, 2008).

Understanding of Game Sense

All the coaches felt that 'Game Sense was the use of minor or small-sided games in their training programs. Paul said that using games at training created an environment or context, which was similar to that of a competitive game. He felt that this meant using game-like activities to create opportunities to learn visual and physical skills while at the same time developing players' understanding and level of communication that would be used in a competitive game:

My understanding of Game Sense activities is probably referring back to what I was talking about before in terms of contextual environments. Having activities that are game like that allow the player to perform their activities in an unthreatening way but in a way in which allows them to grow, possess, and develop a set of skills both visual, physical skill wise. Understanding, communication, all those bits and pieces that in the heat of battle need to be performed at a high level. (Paul, personal communication, February 12, 2008)

Walter, like Paul, feels that Game Sense is the use of games or game-like situations in training that are competitive and require decision-making. As a result, players develop their game understanding and skills at the same time in an environment that has an element of competitive pressure. In response to a question about his interpretation of Game Sense, Walter said:

Well Game Sense is probably what I've been talking about in many ways and it's creating competitive situations based on parts of the game that you want to develop that are decision laden and put players under competitive pressures and as a consequence of that they develop their game understanding and their skills at the same time. (Walter, personal communication, March 26, 2008)

Rodney felt that Game Sense was creating a training context using games, which resembled the actual event, in preparation for it. By using games at training, Rodney thought that players experienced similar conditions and that this prepared players for the actual match. This included the type of thinking and decision making required in a competitive match. In response to a question about his understanding of Game Sense, Rodney said: "It's creating a context that's similar to the event in preparation for the event" (Rodney, personal communication, January 6, 2008). Arnold was less certain about what he thought Game Sense was but viewed it as an opportunity to use games with similar decision making requirements to a competitive match: "We're using other games with a similar decision making to rugby, that's my understanding of it" (Arnold, personal communication, March 26, 2008).

Application of Game Sense to Training

Four prominent themes emerged from the analysis of the data regarding the application of Game Sense by the participants in their approach to coaching. These are set out below and discussed separately:

1. the place of games in training;
2. creating specificity and replicating match conditions;
3. exciting, motivating, and inspiring players; and
4. views on limitations and challenges of game-based training.

The Place of Games in Training

All the coaches said they used games in their training programs and that they were a part of the way they would coach in the future. Paul said that he was interested in adopting more game-based training in his future approaches to coaching as it developed improvements in players and created advantages:

I'm certainly an advocate for pushing most of our training that way. I think though down the road that more of our training's going to be within games as we try to look for a little bit of an edge. (Paul, personal communication, February 12, 2008)

However, although Paul was keen to use game-based training, he was aware of the pressures of coaching and the need to be pragmatic about the methods he used. Time was a factor for him, and he recognised that the questioning, which was associated with the use of the Game Sense approach, required time for discussion and collaboration. Paul felt that there were times when he needed to strike a balance and push on with training in a more directed fashion because there were areas that needed to be covered in order to prepare for competition. He also thought that not all players learn through Game Sense, and he needed to cater for this. When asked about the contribution of Game Sense in his training sessions, Paul said:

But I think it's a great approach (Game Sense) but I think it's like anything, from a coaching perspective I think there's real balance between having the time to do that sort of activity and questioning approach to the practicalities of it all and some people learn better in different ways. (Paul, personal communication, February 12, 2008)

Walter said that games made a significant contribution to the way he coached. He said that games were used at every field session as either part of the warm-up or as a way to improve the skills of players. When asked how he used games, he said: "We use them as part of our warm ups; we use them as part of our unit skills" (Walter, personal communication, March 26, 2008).

Rodney held views similar to Walter about the place of games in training programs. In the discussion about the uptake of games, they both held beliefs that it was second nature and commonplace to use them. When I prompted Rodney that not all coaches have taken up the use of games as a teaching platform in coaching, he replied: "Which is a bit scary really" (Rodney, personal communication, January 6, 2008). Arnold said he used games regularly as part of his approach to coaching and that it met the kinaesthetic learning style requirements of many players, especially those from a Polynesian background. Arnold said that some players preferred to play games as they were kinaesthetic learners: "Because at the end of the day, most young men, particularly our Polynesian players, are much better

kinaesthetic learners than they are anything else" (Arnold, personal communication, March 26, 2008).

Creating Specificity and Replicating Match Conditions

All the coaches viewed games as having the ability to replicate the requirements of a competitive match in training. Paul saw rugby union as an "invasion" sport, and the best way to train for it was to use an approach that was similar to the actual game. This included using certain activities, which are specific to rugby union and simulated a rugby union game. These included the ability to recognise space and cues and react accordingly by moving the ball to where it is needed. Paul said that games were able to simulate the competitive nature of a rugby union game:

There's just nothing like it [games] to simulate where the potential space is and getting people to read the cues and understand how to get the ball into that space as quickly as possible whether you're running it, kicking it, passing it. (Paul, personal communication, February 12, 2008)

Walter felt that the use of games simulated and was specific to the demands of a competitive match: "It's simulation of what you're going to come across on Saturday." He also thought that "specificity is hugely important, and it's logical to the players" (Walter, personal communication, March 26, 2008). He used modified games to simulate or replicate those parts of the game that he wanted to work on in preparation for a match. When asked how he used games in his training sessions, Walter said: "We play a lot of modified sort of touch games that replicate the sort of game we want to play" (Walter, personal communication, March 26, 2008). Furthermore, he said that using this approach encouraged players to make decisions in competitive situations, which involves using simple skills in complex settings. He attempts to replicate a competitive game by introducing noise, decision making, and the level of competitiveness that would be present in a match, making these comments on how he achieved these goals in modified games:

I create a lot of noise at training so try and get guys making decisions while other things are happening around them. So change the situations all the time, having other people in the way, just trying to load the activities up with decisions, competitiveness and getting them to use quite simple tasks but in complex situations. (Walter, personal communication, March 26, 2008)

Rodney used games to create a training environment that replicated the conditions of a competitive match. He felt games were the activity that most closely mimicked the thinking and decision making that players would encounter in competition. When asked how he used games in training, Rodney said:

So you're training in an environment in a context that's giving them as close a replication of some of the thinking or some of the decisions they're going to have to make in a game in training. (Rodney, personal communication, January 6, 2008)

Rodney argued that the use of games was the perfect preparation in advance of the competition because it was possible to foresee competition conditions and mirror them in

a game at training. Players would be able to experience these conditions, and this enabled players to be familiar with similar events or circumstances in a game when they arose. This led to players having more time to make decisions because they have seen it before in training:

So you're giving them the perfect preparation in advance of the [competition] game so that when they get to the game they have a sense of having been there before and hopefully they're not confronted with things and decisions and choices that they haven't made in preparation. And they have a greater sense of time because through their preparation you have contemplated or experienced all of the circumstances they're likely to experience in the game. (Rodney, personal communication, January 6, 2008)

Exciting, Motivating, and Inspiring Players

All the coaches said that games provided excitement at training. The games helped motivate players during a long physically and mentally demanding season. Walter used his experience to explain how traditional coaching with its emphasis on drilling technique would not have worked during his time coaching in Italy. The Game Sense approach was the best use of time because it motivated and excited both the coach and the players.

The thing was over there, the Italian people just wouldn't be motivated by unopposed training, analytical approach. And so Game Sense is inspiring, it's motivating to athletes. It excites them. It excites our athletes as well as everyone else. (Walter, personal communication, March 26, 2008)

Paul said how he felt that the advantage of using games was their ability to generate "competitiveness" and "fun" amongst the players who he said were "competitive beasts" (Paul, personal communication, February 12, 2008). He also said that the players became excited when given the opportunity to participate in games at training rather than having to adhere to instructional technical sessions. Rodney felt that the key to using games was understanding when a player or players would gain the greatest benefit. Once players understood the reason for using a game, they were excited and would find solutions to problems generated by the game. Rodney made this comment when asked about the value of games in training:

Yeah, well the key is when to do it and why to do it and once they understand that, then they're excited 'cause they've got a reason to do it and then they'll find the solution. They'll recognise in the game well now's a good time. (Rodney, personal communication, January 6, 2008)

He also felt that specific physical conditioning was an outcome of using games because players were having fun and were unaware of the fitness outcomes: "And you're also doing conditioning as well without realising it, 'cause you enjoyed it (laughter)" (Rodney, personal communication, January 6, 2008). Arnold referred to the use of games as creating "fizz" to describe the enjoyment players experienced when playing games (Arnold, personal communication, March 26, 2008). He felt that games motivated players and provided excitement because they created a competitive environment at training: "That's excitement

for us, 'cause they like competing" (Arnold, personal communication, March 26, 2008). He said that the players' desire for games was evidenced by their continued requests for more games during training sessions: "Like we get every week, we have requests for more games" (Arnold, personal communication, March 26, 2008). He also felt that many of the technique-driven activities did not motivate players: "They don't particularly enjoy doing and I can understand why when you're doing skill, repetition skill work. I mean, it's boring" (Arnold, personal communication, March 26, 2008). Arnold was pragmatic about the use of games, saying it was not always possible to use game-based training because of the competing demands for training time: "But your time's always your worst enemy in coaching" (Arnold, personal communication, March 26, 2008).

Views on Limitations and Challenges of Game-Based Training

The analysis of the response to the limitations of game-based training produced one theme, which was consistent with three of the coaches. Paul, Walter, and Arnold felt that disrupting the game to give feedback was difficult. They discussed the difficulties in stopping the game and providing feedback to players. Paul felt that in order to effectively use games there needed to be a number of additional coaches available to give feedback to players when they were removed from the game. He was also reluctant to stop a game because players become agitated when removed from a game because they were having fun. Because of this, he saw the need to remember and record areas for development and work with players when they were more receptive to error correction and feedback. This response to a question about the limitations of using games in training reflects both Paul and Walter's views:

Yeah one of the big difficulties about using [games], this is where you need a lot of coaches on hand, 'cause you're going to ... it's pulling individuals out of a game that they're competitive and having a lot of fun in to do some remedial work. So having the ability to recognise the issues of the athlete and then being able to address it at a different time is pretty important too I think. Like you just put it in the back of the recess or jot it down, this guy here's battling to pass to his left or whatever it may be. And then finding the right time to pull him out and give him that remedial work, when he's probably more receptive. (Paul, personal communication, February 12, 2008)

Walter was reluctant to stop a game and felt that the process of stopping the game for remedial work or skill correction required the use of questioning. Players were not normally in a frame of mind to answer questions, especially if the game was highly competitive: "Players get pissed off if you ask too many questions" (Walter, personal communication, March 26, 2008). He was conscious of the need to be observant of players and to wait for an appropriate moment to discuss a performance issue.

Arnold also felt that it was difficult to carry out skill correction while the players were participating in the game and that players did not want to stop playing when they were having fun. He made this comment when asked about the limitations of using games in training:

It's bloody hard to do skill correction while they're playing a game. You can, but they don't want you stopping them and doing skill correction while they're playing

the game. So it makes it difficult. (Arnold, personal communication, March 26, 2008)

Observations confirmed that all the coaches used game-based activities in their coaching programs. Paul used games as part of the warm-up at all the sessions I observed and then progressed to using game-based scenarios. He started each session with a question to the players about the strengths and weaknesses of the team's next opponent and encouraged all the players to make a contribution to possible options. Walter began his sessions with a question to the team about particular scenarios, which might emerge in their next competitive match and then created a game that mirrored the scenarios. He took time to question players about their interpretation of the scenario and their reactions. Rodney used a simple game at each session that involved creating space and decision making in an attacking situation for the backs. Paul, Walter, and Rodney asked questions of the players during times when the game slowed or broke down to elucidate understanding. Arnold used games after first practising and refining skills in a traditional coach-directed approach; however, at the end of each session he gathered the players and coaching staff together and facilitated discussions about the aims of the session and encouraged feedback from the players.

Discussion

Paul was the only coach to have participated in formal education on Game Sense. Walter and Rodney felt that they had a practical knowledge of Game Sense gained from their experience as players in the era prior to the introduction of professional rugby union. However, they were both aware that Game Sense had been formalised and had entered into the discourse of coach education. All four New Zealand participants felt that the use of games was an important part of their own coaching and would be an important consideration in future approaches to coaching. Their understanding of Game Sense was that it involved the use of small-sided games or game scenarios that replicated the conditions of a competitive game. They felt that by replicating these conditions of a competitive game, players learnt to deal more easily with the requirements of competition. They tended to see the use of games in their coaching as a medium for learning skills and decision making rather than merely as a means for testing prelearned skills. They felt that games provided a high level of motivation and inspiration and that this led to learning as suggested in much of the literature (Hadfield, 2009; Kidman, 2005; Light, 2004a).

Although not exactly following the pedagogy of Game Sense as suggested in the literature (e.g., Light, 2012), the participants' practical use of games is loosely consistent with it. Paul, Walter, and Rodney created games or game scenarios and engaged players in discussion about the ramifications of actions associated with the circumstances. My observations also indicated that the participants allowed time for players to work through various permutations associated with the game or challenge. Paul was the only participant to articulate the specific need for questioning, but observations indicated that Walter and Rodney did have a practical application of the questioning pedagogy required when using Game Sense. While Arnold did not use games as a teaching platform in the sessions I observed, he did allocate time for discussion at the end of training with the purpose of engaging the players in reflection. He was also aware of the importance of games in creating fun and motivation.

The coaching approaches adopted by the coaches in this study were shaped by the culture of rugby coaching in which they worked. When rugby coaching in general in New Zealand is considered, there seems to be an emphasis on holistic approaches to coaching with consideration given of the player's life and experience outside rugby union. In some ways, this is similar to the constructivist perceptions of learning that researchers claim underpin Game Sense and TGfU (e.g., Kirk & Macdonald, 1998). These approaches consider the experiences and knowledge that learners (players) bring to the learning experience, which shape or structure the learning/knowledge that they construct. In this way, the coaches' approaches to coaching align well with the assumptions underpinning Game Sense and TGfU (Light, 2008).

The participants had all heard of the term Game Sense and used games in their coaching to different degrees, but coach education had not made a significant impact on the participants' understanding or knowledge of Game Sense. Paul, Walter, and Rodney had been aware of the work of Rod Thorpe with TGfU through the work of a sports educator in New Zealand. Only Paul had been involved in any formal training in Game Sense. The remainder of the participants gained their knowledge about Game Sense from their personal experience during their time as players and through their experience of coaching. Walter and Rodney claimed that they learned about the use of games in the amateur era when there was limited time for training. Arnold had gathered his knowledge about Game Sense from other coaches. Experience has been cited as one of the major avenues for developing expert coaching knowledge (Abraham & Collins, 1998; Culver & Trudel, 2006; Lyle, 2002; Mallett, Rossi, & Tinning, 2009). There seemed to be a strong movement toward more holistic conceptions of coaching captured in the notion of care. As part of this culture, the New Zealand participants have been in contact with coach educators such as Lynn Kidman and Dave Hadfield who promote athlete-centred and questioning approaches to coaching, and this approach has had an influence on all coaching at a national level (Cassidy & Kidman, 2011).

When encouraged to think of Game Sense as pedagogy, the participants indicated that successful implementation required games to be designed in such a way as to create a level of specificity that related to or was expected in an actual match. They valued the contribution of games and viewed them as important in their future approach to coaching. The participants viewed games as a way for players to learn the skills and knowledge required to play rugby union. This involved the capacity of games to motivate and challenge players and is consistent with claims that Game Sense creates intrinsic motivation and implicit learning that leads to deeper learning than can be gained from de-contextualised skill training (Brooker, Kirk, Braiuka, & Bransgrove, 2000; Hadfield, 2005; Kidman, 2005). In particular, Paul, Walter, and Rodney viewed the use of games as having the capacity to provide a learning environment and a way for players to improve. The coaches used games or game scenarios at all of the sessions I observed and used questioning to determine whether players understood the requirements of the task. There were often periods of prolonged discussion between players and with the coach.

Conclusion

The implementation of Game Sense not only involves the use of a game during training but also requires the use of its pedagogical principles, including the ability to design games appropriate to the context and situation so that an effective learning environment is created

(Chandler, 1996; Thomas, 1996; Light, 2012). While many coaches use game-based training activities and the term Game Sense has become part of the discourse of coaching, it is an approach that is still not well understood. There is sometimes confusion between the terms Game Sense, as a reference to a pedagogical approach, and game sense, as a sense of the game that is made worse by the use of Game Sense to develop game sense (Brooker & Abbott, 2001; Light, Harvey, & Mouchet, in press). There is also a view of Game Sense as just being the use of games in training without any consideration of its particular pedagogy that is misleading (e.g., Light & Evans, 2010).

Despite the range of factors that seem to restrict the influence of Game Sense and similar approaches on a large scale, Game Sense has come to form a very strong influence on rugby coaching in New Zealand over the past decade. From the 2011 Rugby World Cup winning All Blacks to the most junior players, Game Sense has influenced rugby coaching in New Zealand, with this paper providing some useful insight into how individual coaches interpret it and use it at elite levels and how it can contribute toward improving performance in rugby at the highest levels of competition. The literature in physical education and coaching suggests that teachers' and coaches' experiences and beliefs can make the uptake of Game Sense pedagogy and similar approaches difficult (e.g., Light & Evans, 2010; Rossi, Fry, McNeill, & Tan, 2007). However, while the individual coaches in this study had different experiences and views on Game Sense, they generally embraced it. This was positively influenced by some specific experiences of it over their careers but also by the specific context of rugby coaching in New Zealand, suggesting the conditions needed for the successful uptake of Game Sense and the importance of the contexts within which it is implemented.

References

- Abraham, A., & Collins, D. (1998). Examining and extending research in coach development. *Quest*, 50, 59-79.
- Baumgartner, T. A., & Hensley, L. D. (2006). *Conducting and reading research in health and human performance* (4th ed.). Boston: McGraw Hill.
- Brooker, R., & Abbott, R. (2001). Developing intelligent performers in sport: Should coaches be making more sense of Game Sense. *Journal of Sport Pedagogy*, 7(2), 67-83.
- Brooker, R., Kirk, D., Braiuka, S., & Bransgrove, A. (2000). Implementing a game sense approach to teaching junior high school basketball in a naturalistic setting. *European Physical Education Review*, 6(1), 7-26.
- Cassidy, T., & Kidman, L. (2010). Initiating a national coaching curriculum: A paradigmatic shift. *Physical Education & Sport Pedagogy*, 15(3), 307-322.
- Chandler, T. (1996). Reflections and further questions. *Journal of Physical Education, Recreation & Dance*, 67(4), 49.
- Culver, D., & Trudel, P. (2006). Cultivating coaches' communities of practice. Developing the potential for learning through interactions. In R. L. Jones (Ed.), *The sports coach as educator. Re-conceptualising sports coaching* (pp. 185). New York: Routledge.
- den Duyn, N. (1997). *Game Sense: Developing thinking players*. Canberra: Australian Sports Commission.
- Dewey, J. (1997). *Democracy and education: An introduction to the philosophy of education*. New York: The Macmillan Company. (Original work published 1916)

- Hadfield, D. (2009, January 19). Understanding decision making in rugby. *RFU Technical Journal*. Retrieved from <http://www.rfu.com/TakingPart/Coach/CoachResourceArchive/~media/Files/2009/Coaching/Articles/TacticsPhilosophy/decisionmaking.ashx>
- Kidman, L. (2005). *Athlete-centred coaching: Developing inspired and inspiring people*. Christchurch: Innovative Print Communications.
- Kirk, D. (2009). Toward a socio-pedagogy of sports coaching. In J. Lyle & C. Cushion (Eds.), *Sport coaching: Professionalisation and practice*. Edinburgh: Elsevier.
- Kirk, D., & Macdonald, D. (1998). Situated learning in physical education. *Journal of Teaching in Physical Education*, 17, 376-387.
- Kitson, R. (2005, July 2). How All Blacks went back to their roots. *The Guardian*, pp. 8, 9. Retrieved from <http://www.guardian.co.uk/sport/2005/jul/02/lions2005.rugbyunion2>
- Light, R. (2004a). Coaches' experiences of Game Sense: Opportunities and challenges. *Physical Education and Sport Pedagogy*, 9(2), 115-132.
- Light, R. (2004b). Implementing a game sense approach in youth sport coaching: Challenges, change, and resistance. *Waikato Journal of Education*, 10, 169-180.
- Light, R. (2006). Situated Learning in an Australian surf club. *Sport, Education, & Society*, 11(2), 155-172.
- Light, R. (2008). Complex learning theory—Its epistemology and its assumptions about learning: Implications for physical education. *Journal of Teaching in Physical Education*, 21, 21-37.
- Light, R. L. (2012). *Game Sense: Pedagogy for performance, participation, and enjoyment*. London: Routledge.
- Light, R. L., & Evans, J. R. (2010) The impact of Game Sense pedagogy on elite level Australian rugby coaches' practice: A question of pedagogy. *Physical Education and Sport Pedagogy*, 15(2), 103-115.
- Light, R. L., Harvey, S., & Mouchet, A. (in press). Improving 'at-action' decision-making in team sports through a holistic coaching approach. *Sport Education and Society*, 2012.
- Lyle, J. (2002). *Sports coaching concepts: A framework for coaches' behaviour*. London: Routledge.
- Mallett, C., Rossi, T., & Tinning, R. (2009). *Knowledge networks and Australian Football League coach development: People of influence*. Paper presented at the 2008 AIESEP World Congress. Sport pedagogy research, policy, and practice: International perspectives in physical education and sports coaching, Sapporo, Japan.
- Neuman, W. L. (2006). *Social research methods: Qualitative and quantitative approaches* (6th ed.). Boston: Allyn and Bacon.
- Rossi, T., Fry, J., McNeill, M., & Tan C. (2007). The Games Concept Approach (GCA) as a mandated practice: Views of Singaporean teachers. *Sport, Education, & Society*, 12(1), 93-111.
- Ryan, G. (Ed.). (2008). *The changing face of rugby: The union game and professionalism since 1995*. Cambridge: Cambridge Scholars Publishing.
- Thomas, K. (1996). *Game Sense - Whats Happening*. Paper presented at the 1996 National Coaching and Officiating Conference, Brisbane.
- Tinning, R. (2008). Pedagogy, sport pedagogy, and the field of kinesiology. *Quest*, 60(3), 405-424.

Copyright of Asian Journal of Exercise & Sports Science is the property of Asian Journal of Exercise & Sports Science and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.