Coach Logic and athlete learning

A research report prepared for Coach Logic

by

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Declaration:

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Acknowledgements

Coach Logic and athlete learning: Executive summary

Introduction

The ability of the coach to facilitate athlete learning has become an increasingly common topic of discussion within recent research in the field of sports coaching (Light, Harvey, & Mouchet, 2014; Padley & Vinson, 2013). How coaches can use video analysis to facilitate athletes to be more active in the learning process has not received much attention within recent research – this is especially true when considering the range of relatively new online systems which facilitate such processes. Coach Logic is an online coaching platform which is a commercial service paid for by annual subscription by each club. Within the 'Video Room' of Coach Logic, coaching staff are able to upload training and match footage for all their team to view. Subsequently, either players or coaches could create and apply 'tags' to the footage to highlight a particular element of play, for example, 'successful line-out'. Finally, Coach Logic enables players and coaches to add comments to each individual tag and, more generally, to each video clip. These clips, tags and comments can be supplemented by other documents such as training plans, playbooks etc. which can be uploaded and shared through other 'rooms' within Coach Logic.

Research aims

The aim of this investigation was to examine Head Coaches' use of Coach Logic with a particular focus on athlete learning through processes which encouraged active engagement from players. Furthermore, this project investigated the factors which determined athletes' engagement with the platform, their broader perceptions of the importance of PA, as well as the perceived success of the various processes.

Methods

Seven head coaches (five rugby union and two field hockey), their assistant coaches and some of their players were interviewed. The interviews lasted between 17 and 85 minutes. All of the coaches, assistant coaches and players were male. Each interview was transcribed word-for-word and key processes and themes were drawn from the interview data.

Results

The analysis of data revealed three key principles that demonstrated how coaches had sought to use Coach Logic to benefit their teams. The first principle was 'Getting athletes actively involved in the process of analysis'. This comprised genuinely seeking players' input into the process of analysis by sharing match footage and asking for feedback in a number of different ways such as online comments and/or group discussion. The second principle was 'Getting athletes to work collaboratively when analysing performance'. This comprised getting athletes to work together to come up with ideas – this was done both in general small groups but also in match-specific blocks such as scrummaging groups, line-out units and penalty corner teams. Finally, the third principle comprised 'Getting senior and junior players to benefit from each other's' perspective'. Within this investigation there was some evidence of young athletes being paired with senior players to facilitate learning – this was very positively received.

Conclusion

We are confident that Coach Logic, and other systems of this type, have an important place in contemporary coaching practice and can benefit athlete learning. Other benefits might also be apparent in terms of the potential to enhance team culture and cohesion. The accessibility and practical functionality of Coach Logic is important in ensuring coaches, players and other support staff are engaged with the process. There are many potential contexts and applications for Coach Logic,

although we consider that performance-focused sports teams operating at amateur level, such as those featured in this investigation, where face-to-face training time is precious and often greatly limited, have a great deal to gain by utilising this system. However, it should be remembered that such systems will only ever augment, and not replace, excellent coaching practice and the importance of coach-athlete contact time.

Coach Logic enables the active involvement of athletes in the process of performance analysis and this appears to be valued and accepted by all parties. Utilising Coach Logic may enhance athletes' intrinsic motivation as players will feel empowered by being involved.   From a social perspective, we have shown that utilising Coach Logic has helped to develop a positive team environment and peer-to-peer working at a variety of levels. This investigation has evidenced considerable good practice, but also challenges coaches to consider how they frame the acquisition of knowledge for their athletes – are we merely leading our players to a pre-determined solution? Or are we genuinely interested in their opinion to the extent that we are willing to act on their suggestions – even if they conflict with our own assessment? Given the importance of the social processes outlined here, alongside the challenges experienced by some coaches in responding to the differing perspectives offered by players, it appears that coaches need support to develop their practice in facilitating a wholly inclusive learning community which embraces a wide range of experience, knowledge and abilities.

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Introduction

The ability of the coach to facilitate athlete learning has become an increasingly common topic of discussion within recent research in the field of sports coaching (Light et al., 2014; Padley & Vinson, 2013). Facilitating athlete learning is commonly called coaching pedagogy. Investigations into sports coaches' beliefs concerning the facilitation of athlete learning have most commonly revealed a weak understanding of pedagogy (Evans, 2006; Light & Evans, 2013). Most (traditional) coaching practice is technically-focussed and so is predominantly concerned with the 'passing down' of knowledge from coach to athlete. In this traditional pedagogic practice, athletes are passive in the learning process – i.e. they are 'mere' receivers of the coach's knowledge (Roberts & Ryrie, 2014). Most recent research suggests that coaches should adopt non-traditional pedagogic approaches in which athletes are much more active in the learning process thus recognising the complex and dynamic nature of most sporting environments (Chow et al., 2006; Pill, 2014). How coaches can use video analysis to facilitate athletes to be more active in the learning process has not received a great deal of attention within recent research. This is because video analysis a relatively new addition to the support services available to sports coaches (O'Donoghue, 2015). Despite being relatively new, video analysis is now commonly accepted as a crucial component of the coaching process (Groom, Cushion, & Nelson, 2011; Groom, Cushion, & Nelson, 2012); however, only a few studies have examined this issue from the perspective of athlete learning. Reeves and Roberts (2013) highlighted that video-based performance analysis within elite youth football is considered a necessary tool for coaches and players alike and can contribute to several key developmental areas: a) team and individual performance, b) reflection, and c) psychological implications. Bampouras, Cronin, and Miller (2012) discovered that players were sceptical of performance analysis when they did not have an active role (i.e. they had no opportunity to input) in the process. Bampouras et al. (2012) reported that coaches believed players were unable to identify any particular issues with a performance and were unable to cope with the information.

Perhaps the main study investigating individual players' perceptions of performance analysis was conducted by Groom and Cushion (2005). Groom and Cushion (2005) found that video feedback was a useful tool to stimulate players' learning and provided opportunities to improve game understanding and decision-making, recognise individual and team strengths, improve individual and team weaknesses and develop analytical skills. Related research by Nelson, Potrac, and Groom (2014) and Francis and Jones (2014) has also suggested the potential usefulness of performance analysis as a tool for athlete learning, but has not included any consideration of how players could work together within this process. Regardless, all the literature cited here suggests coaches should encourage the active involvement of athletes within video and performance analysis whilst ensuring athletes take personal responsibility for conducting their own evaluation on their performance.

Research Aims

The aim of this investigation was to examine Head Coaches' use of Coach Logic with a particular focus on athlete learning through processes which encouraged active engagement from players. Furthermore, this project investigated the factors which determined athletes' engagement with the platform, their broader perceptions of the importance of PA, as well as the perceived success of the various processes.

Methods

A representative from Coach Logic sent an email to all the Head Coaches using the platform at the time the project was conducted (June-August 2015) with an invitation to take part in the research. Twelve coaches responded of which seven were able to meet the inclusion criteria of 1) being based in the UK 2) having used the system for at least six months and 3) being able to offer access to players for group interviews. All of the coaches, assistant coaches and players were male. Table 1 provides a break-down of the key characteristics of the sample clubs. In each case, the 'assistant' coaches and 'players' columns represent the number interviewed rather than the absolute number involved at each club.

Table 1: Key characteristics of sample clubs

Club	Sport	Level	Head Coach	Assistants	Players
A	Rugby union	National league – senior amateur	L4; 22 years	3	6
B	Rugby union	National league – senior amateur	L3; 4 years	1	7
C	Rugby union	National league – senior amateur	L3; 15 years	2	7
D	Rugby union	Amateur club academy (U18)	L3; 4 years	0	9
E	Rugby union	Private school academy (U18)	L3; 26 years	1	6
F	Field hockey	Regional league – senior amateur	L2; 20 years	1	6
G	Field hockey	National league – undergraduate and postgraduate student	L4; 30 years	0	6

Coach Logic is an online coaching platform which is a commercial service paid for by annual subscription by each club. Within the 'Video Room' of Coach Logic, coaching staff are able to upload training and match footage for all their team to view. Subsequently, either players or coaches could create and apply 'tags' to the footage to highlight a particular element of play, for example, 'successful line-out'. Finally, Coach Logic enables players and coaches to add comments to each individual tag and, more generally, to each video clip. These clips, tags and comments can be supplemented by other documents such as training plans, playbooks etc. which can be uploaded and shared through other 'rooms' within Coach Logic.

A semi-structured interview schedule was created for each of the groups in question. Questions were designed to gauge perceptions of the online system, the performance analysis-related processes in place at the club and any operational/logistical issues or concerns. A member of the research team visited each of the seven clubs conducting individual interviews with the Head Coach (duration 33-85 minutes). Individual or group interviews with assistant coaches (duration 17-75 minutes) and a group interview with players (31 to 42 minutes) were also conducted. Each interview was transcribed word-for-word and key processes and themes were drawn from the interview data.

Results and Discussion:

The interviews revealed three distinct ways in which coaches were seeking to enhance athlete learning through their use of Coach Logic. These three methods will be presented in turn to illustrate some of the ways in which the coaches sought to facilitate athlete learning. Key themes from the interviews will then be discussed with quotations from coaches and players presented to further illustrate their respective beliefs concerning the effectiveness of the various approaches.

Principle 1: Getting athletes actively involved in the process of analysis

The first and most prolific principles evident across all seven clubs within this investigation was to use Coach Logic to get athletes more actively involved in the process of analysis. For example, Aaron (Coach, Club A) described how he acknowledged the desire for athletes to invest time in the analysis process and also placed the onus on the players to review their own performance:

> They actually review a game. I will either send an email out or I will send on the message board; my focus areas are this, this and this. ... Trying to get them to think of the reason why we're going to do what we're going to do at training is because of this, this and this. … So to actually watch a video, is really difficult to do well as a player. You know, it takes a long time and it's about picking up the cues and doing it. So I think as a coach, I want to use that platform, to be able to go and educate them.

Freddie (Coach, Club F) and Chris (Coach, Club C) respectively outlined how the desire get athletes actively involved in the process of analysis reflected their beliefs concerning the changing nature of coaching:

> The dictatorial coaching days have gone really. I think it's very much about that empowerment, providing good leadership when the coaching group that you have need it because that's the best way to learn as a player.

> …for the players to try and feel as empowered as possible. To contribute. That continues in the session that you do …

The value of player involvement in the process of performance analysis is further supported by the testimony of James (Player, Club B):

> I think it's a case of the more you put in the better you get out of it. If you put rubbish in or you don't put anything in, then you're not going to get anything out of it. So, the more comments and feedback, weights programmes go up, if you put in what you're doing things can be monitored and improved on. If you just don't put anything in then you're not going to get anything out of it, so it's a bit of ownership, if you put in the info you'll get more out of it.

James' belief in the value of athletes being involved in the process of analysis is qualified by assertion that benefit can only be derived when players are sufficiently engaged with the process that they take the time to add quality comments and tags to the videos they were asked to view. Nonetheless, the potential value of these processes as evidenced by coaches and players, confirms what previous research has suggested about the possible impact of effective, player-involved, video analysis processes (Francis & Jones, 2014; Groom & Cushion, 2005; Nelson et al., 2014).

A key theme apparent within the interview data was the importance coaches placed on the benefit of Coach Logic to enable athletes to have time to think about, and analyse, their performance rather than demanding the type of immediate response that might be typical, for example, within training sessions or on match days. For example, Alf (Assistant coach, Club C) said:

> …the forwards coach will highlight some areas to individuals and say 'come back and do the line outs, because those need work; Why didn't they work? Have a think between the three of you and come back'. They come back on a Tuesday, or before if you've been in contact with them previously, … and say x, y, and z about that. 'Maybe if we use more ball at the front and more at the back or lift earlier or later' - Whatever it may be; it's empowering the players.

Some recent research (Cope, Partington, Cushion, & Harvey, 2016; Cope, Partington, Harvey, & Cushion, 2014) has suggested that coaches often demand responses to questions too quickly without allowing athletes to genuine think about their response and so limiting the depth and quality of the learning experience. Our findings suggest that the coaches we interviewed understood the importance of enabling their athletes time to think and review their performances. In addition to allowing time to think, several of the coaches discussed needing to provide athletes with time to learn

the process of analysing their own performance and the more general familiarisation with Coach Logic. For example, Glenn (Coach, Club G) said:

I'm very much there … to help them with what they're doing. Because sometimes they don't understand what they're looking for initially. You give them a video clip and it's like 'What am I looking at?' You have to help them initially, so you can't just give it to anybody and say 'Go, get on and do that yourself'. There's got to be a learning process. 'What are we looking for when we've got a clip? When you're on the ball there? Is it just when you're on the ball?' It's not just when you're on the ball either. It's about what are you doing before the ball comes to you. 'What are you doing after you've played the ball?' And they've got to understand that kind of stuff, not just when the ball is on the end of their stick.

Glenn's recognition of the importance of developing understanding of appropriate off-the-ball decision making reflects some recent research which highlights the need for coaches to appreciate the holistic and environmental factors which influence players' decision making (Light et al., 2014). Almost all the players featured in this investigation discussed the positive aspects of being empowered to be involved in the processes of analysis. However, it was also clear that establishing player engagement was not entirely straightforward. For example, Clyde (Player, Club B) said:

If you know someone hasn't done it and was supposed to have done it, they may get a bit of pressure on them. For example if [another player] had asked me on Monday or whatever to do the scrum preview and it's like 5 to 6 on Tuesday and I haven't done it – yeah, he might have a word with me and say 'Why it is not done?' And vice versa,

there's a bit of responsibility as well between the players as well; we take ownership

to get stuff done.

Nevertheless, the evidence concerning the engagement and empowerment of athletes within the analysis processes through Coach Logic was overwhelmingly positive. Our data also revealed that it was through consideration of the social interactions between athletes that coaches developed the analysis processes still further.

Principle 2: Getting athletes to work collaboratively when analysing performance

Throughout this project we found extensive support for approaches to athlete learning which comprised social and collaborative approaches. Our findings are consistent with the majority of recent research which suggests that coaching practice is socially constructed and involves extensive consideration of the relationship between the coach, athlete and the environment (Cushion, 2010a, 2010b, 2010c). In order for athletes to learn it is important that they develop meaningful inter-personal relationships and communicate effectively within a positive environment (Atencio, Yi, Clara, & Miriam, 2014; Quennerstedt, Öhman, & Armour, 2014). Brendan (Coach, Club D) outlines the process through which his club seeks to create such an environment through Coach Logic:

The way we do the video side of things for the first 15 is we split them into four groups,

attack, defence, line-out and scrum groups. Between each group we ask them to leave

a review comment under the game, so someone has to take charge of a review for

each one. We then ask all other players to comment as they see fit if there is

something they notice; get it up so we can create a discussion on the video. We then review it as a team on Tuesday. The good thing about that for me is, as a coach, I can already see where their heads are at …. The coaches will put clips together. Again because it's a time thing, it would be great if we could get the players bringing the clips to us, but asking them to put up a comment is probably the most we can get from them.

Splitting the team to review clips in small groups was a common feature amongst the coaches we interviewed. For the most part, the players were very positive about this process, outlining that they felt this was a process through which they had a genuine opportunity to contribute to the process of analysis. For example, Tim (Player, Club D) said:

> Yeah, when we go into those groups … You have your voice heard a bit more. And your points will be put across … So it is quite good to have open groups and things like that.

Whilst the vast majority of coaches and players valued Coach Logic as a communication tool and felt that the processes generated more dialogue, the consensus was that the focus should remain on talking face-to-face. For example, Andre (Assistant Coach, Club B) said:

> I like talking face to face with people. So if I put comments on [Coach Logic] and you just read them … it just kind of stops there … He will see an attack [online] and say this should happen, that should happen - I don't disagree with it [the player's analysis], but I just feel … you can just jump to conclusions when you're watching something -

as opposed to when you see the whole game. You could be missing the depth or a situation of a defender there, that you can't quite get the right angle. I always want to know what the player was thinking in that situation and why they did what they did.

Andre recognises the positives of commenting online, but also highlights the dangers of failing to understand the whole context and not being able to understand the decision making processes of the players in question in any particular clip. Andre's perspective reinforces the importance of open, honest and holistic communication in facilitating athlete learning. Freddie (Coach, Club F) highlighted the impact of such holistic and positive collaborative approaches to performance analysis on the group dynamic:

> When you look at the footage it makes a big difference to the group … the players, from a peer perspective, they all look at the video. We've got clips of film that show the way we've reacted to what we've seen on the video … on a Thursday or Friday has had an effect on the game. And the players have realised that it's an important part of our preparation. And they are all encouraged.

In addition to Freddie's beliefs surrounding the positive impact of collaborative analysis on the group dynamic, Brendan (Coach, Club B) perceived that there was also a positive impact on the development of leadership within the team:

> So player empowerment is really, really crucial. To show them that they're developing. Because also one of the things … they say we're lacking in leaders. Games are lacking

leaders. They need to wait until half time to be told something. They need the

message to come on from the coaches before they make a change. So unless the

players are given that chance, how can we expect them to do it in a game? … When it

comes to a game we want them to make changes themselves without waiting from

me to come down and tell them.

Brendan's assertion that players need to be given responsibility to analyse and make decisions away

from the performance environment in order to enhance those processes during match play is

consistent with most of the contemporary research in this area (e.g. Baker, Côté, & Abernethy, 2003;

Dyson, 2005; Gutierrez Diaz del Campo, Villora, Lopez, & Mitchell, 2011; Light et al., 2014), although

the relationship with the development of athlete leadership has not yet been established in the

literature. Nonetheless, Freddie's and Brendan's focus on the responsibility of the athletes to input

into the analysis process and the subsequent impact on the culture of the team was another key

theme within the interview data.

Principle 3: Getting senior and junior players to benefit from each other's' perspective

Some of the clubs we interviewed had developed specific strategies to aid the development

of both senior and junior players by having them work together. For example, Dexter (Coach, Club

D) outlined how some of his academy players were benefitting from insights from the club's first XV:

There is Rocco; he's an under 18 player. He's filled in his own tags down the side

[within the Video Room in Coach Logic] … so immediately I can see a lot of set piece

involvement; a lot of ruck clears and a few others, but that's his two main elements. Rocco is a hooker, so that's not the worst. Jason, who is a first XV player, who looked after under 18s last year, has left a comment underneath – 'So a lot of the time, you're going into rucks you're not needed at. You've gone into 13 rucks; if you had gone to seven, you could have gone round the corner and could have had three ball carries'. Now what we eventually try and encourage the player to do, regardless of whether he agrees or disagrees, [is to] leave a comment under and actually get a conversation going ... you hope they build up a relationship with each other, and that has started to happen as we got closer to the end of the season.

Dexter (Coach, Club D) then went on to discuss what he considered to be the impact of online interactions between first XV and academy players:

> Already the feedback from the age group coaches is that they see a massive difference from the players that are involved in the academy [i.e. those junior club members using Coach Logic and 'paired' with a senior club player] and those that haven't. The acceleration of their development has been big and that has been noticeable for the coaches. In terms of player feedback, the guys that are involved in the academy are all feeding back saying that they are really enjoying it. Their parents as well are emailing me to say thanks so much for getting them involved ... it's been really beneficial to them.

Jason's role in Riche's development (and vice versa) reflects recent discussions within the sports coaching literature surrounding models of learning which suggest the coach should embrace the 'more

capable other' in the learning process (Potrac & Cassidy, 2006), a principle drawn from the work of Lev Vygotksy (Vygotsky, 1978). The field of sports coaching knows very little about the role of the more capable other, although this investigation, and the small number of the other works citing this principle, all suggest this idea presents great potential for the discipline and much more research should be conducted.

Giving athletes power to evaluate their own, and others', performance, inevitably raises questions concerning the nature and content of the analysis which players generate. What happens if coaches disagree with the analysis which players generate? Brendan (Coach, Club C) provided an example of how he tried to deal with limitations in the analysis produced by players:

We have had incidences where someone's put up a comment and it's literally been what they've done as an individual - they've forgotten that it's meant to be an overview of a team comment. So we have had times where we've had to remind players that, that's what that's for, a general overview of the team's performance within that area as opposed to their own. [For example], someone has a shocker in the scrum, and someone writes 'scrums were terrible this week', when actually some of the scrums were really good. So you've got to make sure they get that balance. We also need to try and get more of an element of rotation in there, rather than it always being John, who's our 10, commenting on the attacking game. But making sure some of our younger players understand their structures in attack and then writing the comments. Because then it gives me a gauge, of what they're thinking as well as an individual. Not only how the group are thinking but them as an individual. But I would expect them to speak, whoever is doing the commenting each week, I would expect them to have a bit of a chat with that group.

When giving players the freedom to conduct their own analysis, coaches must consider whether their beliefs about learning are founded on *cognitivist* or *sociocultural* constructivism (Cobb, 2005). That is to say, are we leading our athletes to a pre-determined solution or are we happy for our athletes to find their own solution to the problems we (and the game) poses? It is beyond the scope of this report to review these two positions extensively; however, the coaches in our study appeared to address such issues by positioning themselves as the mediators in the discussion and attempted to ensure a balanced discussion. For example, Piers (Assistant Coach, Club B) said:

> Some players will pick up on the good bits, some the bad bits … us, as coaches, want to make sure the balance is there. If they're one way or the other, we need to balance that … How would they analyse it themselves? I think most of their time will be spent looking at themselves and their individual roles. Less will be analysing the units and the team, but obviously the more people you have doing that they will have a greater understanding of the total picture.

Paul (Player, Club D) certainly valued having a range of perspectives to consider:

> I mean like, you just get all these options – not just 'do this'. They'll [the coaches] give you your feedback or something and then you can ask questions about it and say 'can I do this, to improve it or something?', then they'll be like 'yes, no or try this or whatever'. It's just a lot better than them saying do this.

The coaches and athletes we interviewed were split on whether differing perspectives or a consensus of opinion was the most desirable outcome of collaborative performance analysis. This investigation is not able to connect either outcome directly to performance improvement through any objective measure, although the collaborative processes implemented at the teams we investigated extend previous research such as that conducted by Reeves and Roberts (2013) relating to the positive (psychological) associations with video analysis. Reeves and Roberts (2013) suggested that performance analysis is largely related to positive motivation when players considered they had played well but inferred that highlighting poor performances may negatively affect athletes. The interview data we have presented here suggest that facilitating collaborative performance analysis may help to reduce negative psychological responses.

A short note on the effectiveness of Coach Logic

All of the coaches and players we interviewed spoke positively about the benefits and effectiveness of using Coach Logic. This is, perhaps, not surprising given they all consented to be interviewed and so were, at least to some extent, engaged in the system and the related processes we have described above. Nonetheless, we feel it is useful to share some of the things they said about the system. For example, Tyrone (Player, Club F) said:

> Well I think using the video, the opportunity, in terms of our preparation alone, for everyone to see particularly short corners … that's been very beneficial. I think the fact that we scored so many and defended so many short corners is down to the fact that we've seen what the opposition do. So we think that alone has proven to be a benefit.

Andrew (Assistant coach, Club B) is of a similar mid and stated:

> The improvement that the side made from the start of the season to the end of the
> season last year. Was as big as I've seen in a team over one season. The guys really
> improved a lot. Our game improved a lot you know.

The degree to which Coach Logic became central to one of the team's operations was clearly outlined by Dexter (Player, Club B) who said:

> I think it proves it's successful the fact we use it for almost everything, it's our kind of
> go to for analysis, meeting times, weights, playbook, it's our bible basically.

Whilst this project has not been able to comment on the objective impact of the use of the system, it is clear that coaches and players place great faith in the processes and features of the Coach Logic system to the extent that it has become a very central part of all seven club's weekly operations.

Conclusion

We are confident that Coach Logic, and other systems of this type, have an important place in contemporary coaching practice and can benefit athlete learning. Other benefits might also be apparent in terms of the potential to enhance team culture and cohesion. The accessibility and practical functionality of Coach Logic is important in ensuring coaches, players and other support staff are engaged with the process. There are many potential contexts and applications for Coach Logic, although we consider that performance-focused sports teams operating at amateur level, such as those featured in this investigation, where face-to-face training time is precious and often greatly limited, stand the most to gain from utilising this system. However, it should be remembered that such systems will only ever augment, and not replace, excellent coaching practice and the importance of coach-athlete contact time.

Coach Logic enables the active involvement of athletes in the process of performance analysis and this appears to be valued and accepted by all parties. Utilising Coach Logic may enhance athletes' intrinsic motivation as players will feel empowered by being involved. From a social perspective, we have shown that utilising Coach Logic has helped to develop a positive team environment and peer-to-peer working at a variety of levels. This investigation has evidenced considerable good practice, but also challenges coaches to consider how they frame the acquisition of knowledge for their athletes – are we merely leading our players to a pre-determined solution? Or are we genuinely interested in their opinion to the extent that we are willing to act on their suggestions – even if they conflict with our own assessment? Given the importance of the social processes outlined here, alongside the challenges experienced by some coaches in responding to the differing perspectives offered by players, it appears that coaches need support to develop their practice in facilitating a wholly inclusive learning community which embraces a wide range of experience, knowledge and abilities. This investigation has shown some evidence of benefit to younger players and those working with peers; however, future research should consider how more senior players and mentors can learn

from engaging in collaborative activity. Future research should also consider how to more meaningfully construct an inter-disciplinary approach to the use of online coaching platforms which more authentically incorporates the wider coaching team including, for example, strength and conditioning coaches, physiotherapists and performance analysts. Finally, future research should more overtly consider whether more tangible performance improvements can be evidenced through the use of online coaching platforms.

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