

# Making sense of skill – a personal narrative of becoming more skilled at skill

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## Abstract

Skill learning is an extremely complex concept with conflicting theories, practices and concepts promoted by academics and practitioners alike. As a coach for more than 30 years and ex-PE teacher, I have been influenced, adopted, rejected and finally integrated many of these apparent contradictory ideas. By using a personal narrative approach, I hope to bring my journey to life, to share my lived experiences and how I have finally made sense of skill. I present a Skill Learning Chain as a framework that now guides my coaching practice and hope that this helps coaches to avoid some of the many mistakes I have made along the way.

## Introduction

There is much debate about what, how and why sports coaches and PE teachers could and should embed a host of motor learning evidence based research into their professional practice (Collins and Collins, 2013; Farrow *et al.*, 2008; Ford *et al.*, 2010; Runshaw *et al.*, 2011; Williams and Hodges, 2005). For many years such valuable and thought provoking material was hidden away from the very people that most needed it resulting in many of my own generation reflecting on how poor, ill-informed and in some cases damaging our initial attempts at coaching and teaching have been (Armstrong, 2017; Maltbie, 2017, O’Sullivan, 2017). Thankfully the sources and accessibility of information is now much more available, especially if you know where to look and how to assess the validity and usefulness of what is out there. What follows is a personal narrative of my own journey as a PE teacher and coach of multiple sports which hopefully will illustrate a career development journey that many of my peers will recognise and will provide practical examples of how my own career and knowledge base has progressed. I hope this narrative will resonate with coaches young and old and more importantly serve as a short cut for early career teachers and coaches so they do not need to make the same mistakes as mine!

This paper’s use of narrative echoes the growing support for this method in qualitative research (Atkinson and Delamont, 2006; Ellis and Bochner, 2000; Goodson, 2014; Sparkes, 2002) and builds upon previous published work in both

physical education (Louis and Palmer, 2013; Palmer, 2010; Palmer *et al.*, 2016) and sports coaching (Grecic and Palmer, 2013; Metcalfe, 2013; Wilkinson, 2014). Here my narrative serves as data for the reader to consume, consider, unpick and reflect upon to support their own knowledge creation which can be applied to their own professional practice. As such a personal narrative is deemed a valuable tool within qualitative research to transfer rich and meaningful data to its audience (Sparkes, 2002).

By exploring my story, I hope the reader recognises my own reflexivity rather than simple reflection. I appreciate that the semantics of the use of these terms is sometimes confusing (Cunliffe, 2009). Here I aim to demonstrate that I am not simply looking backwards or indeed looking into a mirror to see who I am, instead my intention is to demonstrate how I have used my reflections to learn and change, and how I have then learnt from the reflection process itself and the changes I have made (Bolton, 2010). An interesting analogy is that of Annette Markham who described this act as ‘the researcher actually looking at themselves, looking at themselves in the mirror’ (Markham, 2009:135).

To aid reflexivity and to place my narrative in context I first present a brief personal biography to demonstrate the experiences upon which my reflexivity has been grounded (Markham, 2017).

I started my journey just over 30 years ago. My training rather than learning had first been as a coach when I had religiously followed the NGB directives and manuals, later researching coaching web sites and copying the drills and practices that I found. I undertook various qualifications and sought to prove my coaching competencies through achieving various coaching badges and awards (FA level 1, level 2, UEFA B sessions, RFU Level 1 and 2, ASA Swim teacher, ASSI, ECB Level 1). Later I enrolled on a Post Graduate Certificate of Education in PE and tried to grow my knowledge in other areas so I could pass this on to the pupils in my charge. Again this position was based upon the belief that I needed to continue to collect knowledge that I could repeat, repackage and pass on intact (LTA Level 1, Badminton Level 1, England Basketball Level 1 and level 2 etc.). After 10 years as a PE teacher and 15 years as a coach it was only when I moved into the Further and Higher Education sector that I was exposed to higher level coaches and educators who’s own teaching and coaching philosophies challenged my ontological position and epistemology. For the first time I started to challenge the expected norms of teaching and coaching and realised that I could actually shape and create my own knowledge and not just simply replicate the status quo. What follows therefore are 3 examples of my progression as a coach and teacher highlighting how my views of skill learning have evolved until finally I have been able to create my own understanding and framework to make sense of *skill*.

## **EPISODE 1 - Where have all my yellow cones gone!?!**

I walk out onto the pitch with my bag of footballs, bibs and the requisite cone spike. Thankfully I had arrived in enough time to check the equipment and find that the yellow cones were not present in the store cupboard. The panic, frantic searching of my changing room and the relief when I found the missing cones under a pile of dirty kit pay testament to my regimented obedience of ‘the session plan’. The plan needed 4 different coloured cones and 4 different coloured cones I had to have!

As I meticulously placed each cone equidistant apart marking out my 3 different activity zones I played though the forthcoming session in my head. I had re-read my session plan before I had come outside but wanted to make sure I had remembered every detail.

Just then the boys arrived. They were the most gifted players in the district and I wanted to make sure they appreciated my coaching prowess. I quickly ran over to them, barked my orders and told them which cone in the grid they needed to stand behind. What followed next was a series of warm up runs across the said grid with a ball, through the ‘skill zone’ (marked out with cones of course) with me shouting orders and moves for each run through – ‘left foot only, instep only, Cryuff turn and pass, Maradona turn and pass’ (Now I am showing my age)

I stood back to observe – all was well in the world. From this position I could easily watch each player move and perform in the skill zone, offer my words of wisdom, encouragement, praise and advice for modifications. The drill looked neat, well organised, and I was clearly in control. It was at this point that I blew my whistle!

‘Right now, well done, over to the next activity area – Let’s go!’

We all ran across to the next set of cones demarking 3 points for groups of 3 players to stand.

‘OK the aim of today’s session is to move the ball to create space and open up more opportunities to score. Here we are going to practice moving the ball from one side of the pitch to the other to develop width in attack. In 3’s – one feeder, on player receives, turns and then passes the ball to the third player behind you. That player passes back and then we play the opposite way. Each middle player has 5 goes then we change places. OK? (no time for players to reply) Watch this demonstration of how it is done properly’

With that I selected the 3 most-able boys I knew and directed them step by step to perform the drill. After the initial run through I then prescribed exactly how I wanted the players to turn – ‘in’, ‘out’, ‘inside of back foot’, ‘outside of front foot’ etc. All the time I shouted encouragement from afar, sometimes highlighting faults in

technique and on some occasions, even jumping into the middle of some groups ‘to show them how it was really done’.

When I was finally confident that the players had performed the task correctly I stopped the drill and told each group to pick a blue, red, yellow, and white cone and place each in that exact order around the middle player to create a square. I then reallocated groups creating teams of 4 placing the extra player on the blue cone to act as a defender. With this additional factor to add an element of pressure to the drill I instructed my ‘A’ group to demonstrate with the middle player told to ‘turn out using the outside of your front foot’ to avoid the defender on the blue cone. What followed was a series of repetitions, instructions, demonstrations, with defenders moving from blue to red to yellow to white cone to create pressure on the prescribed skill, all accompanied by my constant commentary on the quality or lack of, the desired method of turning away from the opponent.

Finally, after 45 minutes of almost coordinated movement patterns I decided the players were ready to transfer the skills they have learnt into a game.

My whistle evoked the Pavlovian response I required and the players picked up the footballs and ran across to the next activity area. Here I had marked out a three quarter sized pitch with two channels created by cones that ran parallel to the side lines, each 5m in width. I quickly divided the boys into 2 teams and explained the rules. In this game one player denoted by a blue bib was placed into each channel. I explained to the boys that this player was neutral and would play for whichever team had possession. In order for either team to score the ball had to be passed to each of these ‘neutral’ players and possession retained before the goal was allowed. The neutral players would be changed every 5 minutes to ensure everyone had equal chance to develop their skill in the game.

The game started and I took up my position in the middle of the pitch in order to ensure my instructions could be heard most easily. My usual blanket encouragements were augmented by pleas of ‘wide’ ‘go wide now’ ‘look where Jimmy is’ ‘head up - wide now’. The game progressed well as per my pre-planning but then Jimmy got the ball. Jimmy was a precocious talent. He was already signed to a professional club and by all accounts was a natural and gifted player. Jimmy’s first touch was to flick the ball over an on rushing opponent. He then glided up the pitch, ball under perfect control, always close enough to control and change its direction when pressurised but far enough to ensure his athletic stride was not broken or his top speed compromised. Jimmy beat one player, then another, then another, all the time ignoring my advice, instructions and then orders to use the neutral player. Jimmy was now faced with the last defender. In a haze of unbridled skill and enthusiasm Jimmy trapped the ball on the back of his right heel, flicked the ball over his and the defender’s head and then

bicycle kicked the ball from 20m into the top corner of the goal. Jimmy reeled away in celebration with his teammates rushing over intending to dive upon his back to bask in Jimmy's moment of genius. But then I blew my whistle. The players froze and looked at me for my expert analysis. 'No goal' I stated calmly. 'You didn't use the neutral players'!!!!

## **EPISODE 2 - Just tell us what to do!**

10 years have passed on my learning journey and I have finally realised the error of my ways. Games based coaching – Games Sense, and games based teaching, Teaching Games for Understanding is the order of the day. Players now simply need the correct constraints on the environment, task or individual and the required skills will emerge as they solve the problems presented to them. Despite my previous professional practice, League titles, County championships, Regional awards and National consultancy projects have come my way and I am now coaching in professional adult sport.

The focus of this session is again the use of space and exploiting width to develop scoring opportunities. The difference however is that it is in the sport of rugby.

The players stroll out onto the pitch fresh from their gym sessions, video analysis, massage, taping, or leadership group meeting. I have marked out two pitches with the four corners of each pitch denoted as scoring areas by orange poles placed 5m from each corner intersection. The players go through their individual warm ups, team activation exercises and then convene in a huddle where I explain the aim of the session.

The warm up games involves two equal teams playing 1 second touch on each pitch with the aim of scoring a try in the corner areas. On my command of 'turn' the two teams turn to play in the opposite direction. On my command of 'bounce' both teams rotate 90 degrees to the right to play in a new direction thus changing the picture of the space and options available.

After 10 minutes of quick passing moves, evasive running, periods of motionless bodies and quizzical looks, questions, affirmations and reaffirmations of my playing instructions I bring the game to an end with a whistle. 'Come in' I shout and the players jog in to form another huddle around me. 'OK how did you find that?'. Silence... then finally Jimmy the team captain spoke, 'Confusing....'

'Why was that? What did you find difficult?' Again nothing. 'OK what happened when the game direction changed?'

'People were confused'.

‘Yes but what happened to the space around you?’ Nothing... Then...

‘There was more of it’. I nod and then add to the analysis. ‘Yes, as players reassess during the transition there is a time before the defence realigns that the attack can exploit. Especially if the space is out wide where there are fewer defenders....Right you’ve got that so let’s move onto the next game’.

I then explain the next game where two teams of 12 will play against each other but two players (as is my penchant) will wear blue bibs and play as wingers for whichever team has possession.

The game kicks off and the blue bibbed players quickly take up their positions on the attacking team. Play progresses up the pitch following phase after phase. Finally, the attack pass the ball wide making the most of their numerical advantage and one of the blue bibbed players scores a try in the corner.

‘Perfect execution’ I shout, ‘Well done’.

The game restarts with the blue bibs swapping teams as required. A messy period of play follows with possession changing after every couple of moves and phases. The game then settles down into a clear pattern with the attack keeping the ball close to the tackle area with the forwards simply holding onto the ball, going into contact and then recycling the ball for another forward to drive onwards. I watch at first with professional detachment but then with a level of outcome expectation followed by a building frustration that no-one seems to have grasped the easiest way to beat the game. I can’t stand it any longer. I blow the whistle!

‘Ok – how did that go?’ Silence, blank faces.

What are we doing? What are the attack doing well? What do we need to improve on as a team though? Nothing – some players start to look at each other, others look down to the ground.

‘Remember the last game – where did we say the space was?’

‘Out wide during transitions – Yes. So where do you think the space is in this game especially with the extra players? Out wide – Yes so let’s go back into the game and see if we can exploit that space out wide this time’.

Play continues and to my overwhelming sense of relief the players start passing the ball wide at every opportunity allowing the blue bibs to be fully involved and scoring numerous tries – Success at last! Finally, I can blow the whistle.

We get together and I explain the last game. Here we move to full contact to up the intensity and pressure on players and make it more representative of when we are up against our next opponents in the league. The rules or constraints of this final game is that the attacking team must take the ball straight up the middle of the pitch for 3 consecutive moves before they are allowed to play whatever move they wish. Again the intention here is that during the game defenders will be drawn closer into the middle of the pitch to support their teammates who have tackled or are involved in the competition for the ball, thus creating space in the wide areas that the attack can exploit.

The game starts with both teams taking it in turns to drive the ball forward for the required 3 phases. Possession keeps changing but the attack, in turn, try to gain an advantage by executing additional phases directly forward, tying in players to rucks and mauls and then running at the edges of the breakdown. This takes the ball out wide only to cut back into the middle by dummying to pass wide, but then, players stepping back inside, by kicking high and long, chipped kicks in behind the middle of the defence. Not a single attack tried to use my pre-determined and pre-designed solution. We had to redefine the game and the task staring the players in the face. I blew my whistle again!

‘Right guys that’s not working so let’s reassess things. What are the attacking team trying to do? What tactics are you using? What is the purpose of driving the ball up the middle?’ My words are faster and louder than normal. Nothing! I continue. Where do you think the space is?

‘Behind the defence’ – correct, but not my desired answer.

‘Yes – but if you keep driving forward what is happening to the defence? What happens to their spacing? What picture does that create for you to look at? How can you utilise that space?’

Nothing but blank faces in response, either too confused or too scared to answer.

Now I’m confused – why do they not get it? It is such a simple concept! Is it me? I can feel myself searching for the next probe, prompt in a question to break through this impasse. Just then Jimmy steps up. I instantly feel relieved and validated at the same time. Until that is he speaks....

‘Dave, stop pissing around. You’re the fucking coach, just tell us what to do!’

### **EPISODE 3 – Where I am today...**

After much soul searching, both personal and professional I now find myself in a coaching and teaching space that I am happy to inhabit. I no longer am driven to

collect certificates, rise through the levels or become a rich and famous coach. I am happy to simply play my part in helping young people be as good as they can be. My exposure to different teaching and coaching environments and the amazing people that work there, coupled to my on-going academic and professional learning has enabled me to step back and reassess my goals and aspirations and formulate a teaching/coaching philosophy that I can live by each and every session. I now happily occupy what many call the 'talent space'. I work with teenagers and young adults using an holistic biopsychosocial model of coaching and teaching (Bailey et al, 2009) to support and encourage them to be the best player, teammate, person they can be.

Many elements have influenced my evolution from what must have seemed a very naive coach and [1] person who didn't know what he didn't know, to [2] becoming one who thought he knew what he didn't know previously and was now doing the 'right thing', to [3] one who finally knows and is happy to know that he doesn't know everything but who is experimenting, building his knowledge and learning more every day.

So here I am with a group of teenagers all who aspire to greatness in their sport of rugby. Once again the focus of the session ended in being the recognition of space out wide in games and the awareness of how to use this to best effect.

The players arrive early for the 7pm session. Balls, bibs, cones, poles, pads are sprawled by the side of the pitch. The first two boys start to pass a ball back and forth until two more arrive and they quickly start to play a mini game of rugby. Others arrive and join in until there are 12 in total which prompts me to ask them to consider splitting into two smaller games. The boys quickly follow this advice and within moments the final 10 boys arrive and join in with the two games. Both games look very different. Neither have a clear work space to run around in, there are no cones in sight, and both are obviously playing by very different rules.

I carry the pads and cones over to the opposite side of the pitch so that they can be used in the 'skill development zone'. Through the years this had evolved to now being a player led support tool where boys can self-refer themselves at any time during the session to the zone and ask any of the coaches or fellow players to help them work on an area of their game.

I look back over to the games again then call Jimmy and James over, each from a different game. I ask them to explain what rules, area, teams, scoring system etc their group has chosen and why this is the case? This questioning is no surprise to either of them, as this is how we always get ready to start our sessions, so they each answer confidently and with a clear rationale.

It is 7pm now so I walk over to between the two games and shout to the boys for both bibbed teams and the non-bibbed teams to join together for an equal 11 v 11 warm up game on a full pitch minus the 5 metre channel on each side permanently marked to identify the minimum distance a lineout throw must go - at 50% intensity. The players self-organise, I step to the side and the game starts in front of me.

After 10 minutes or so I shout over for the players to come and stand in team huddles. Each team is asked to assess what they did well, what they needed to improve upon and which they had made such an assessment? When both teams let me know they had made their choices I picked Jim and Jimmy to feedback each team's observations. Both groups identified issues at the contact area around lack of alignment for the forwards and backs which had impacted on their ability to use the space which had emerged in wider positions. I probed to ask why they thought this was the case? Jim explained that he thought his group maybe hadn't known that the space was there quick enough to use it, whilst Jimmy offered that his group didn't really know exactly how and where to realign to when there was a breakdown after a tackle to maximise such an opportunity. This then, was to be the focus of the session!

After a short water break, during which time I consulted with my fellow coaches on our options to address this, the boys split themselves into two groups, one that would work close to the breakdown, and one that would work on a scenario if they were further away.

I supported the 'close in' group first of all. Here we played a 6v5 start stop game in the channel on the pitch marked out by the 15m lines to the touchline (again using permanent pitch marking rather than cones). Here, when a tackle was made and a player went to ground the players stopped momentarily to assess their options. At first the focus was on assessing what methods players could select to get the ball back in play and moving forwards again as quickly as possible. This was quickly achieved by directed questions at specific players (different ones each time). The players' answers were never judged but always asked to be demonstrated so the outcomes could be explored in more detail. Following this attempt, the positive or negative results were unpicked by me directing players' attention to various visual cues which could be used to reinforce or modify their future actions. As and when a ruck occurred (a competition for the ball on the floor with more than one player from each team) not only the actions of those directly involved were considered but also those additional support players and how these choices impacted upon the space and how it was used by both the attack and defence. In particular, the boys presented some common alignments that they had seen discussed on television i.e. the 3 players closest to the ruck but not involved arranging themselves in a 1,1,1 pattern side by side, and a 2,1 pattern with initially one player behind the second with the third a little further away. 'Let's see what happens then' I stated calmly.

What followed was a series of stop start run-throughs again with the boys adopting first the 1,1,1 and then the 2, 1 shape. Each attempt was explored from an outcome, influence and issues point of view with different boys challenged to analyse the effectiveness of the strategy, the impact of the shape on the defence alignment, the space available and the options this provided for the attacking team to go forward during a game.

When we had exhausted the boys frame of reference to the play scenario it was my turn for input. 'What do you all think the defenders are looking at during the ruck? Shout out anything, there are no wrong answers just opportunities to try things and learn from them'

James shouts out, 'The ball.... their opponents opposite them too'

Great I reply, 'So how could you deceive them to get an even bigger advantage? That is the problem for you to solve in the game now'.

We went back into the game but now without any stop start interruptions, one player marked out in a blue bib playing scrum half for whichever team had the ball. The guided exploration that followed was a joy to see. Players from both teams picking up on the cues available and implementing some of the options and shapes we'd just experienced. What also happened however were boys faking, using dummy runners, kicking into the space behind players and when most applicable, drawing defenders into a ruck and then passing or kicking the ball out wide for an unmarked teammate to score.

Whilst my group were exploring options close the breakdown this the other group were also playing a stop start game of 6v5 where they were encouraged to adopt different game starting positions, creative options, positional alignments and explore the visual cues, trigger movements, body positions, space available in the same manner in which I worked with my group. What emerged here too were boys making decisions, learning from their outcomes and then recalibrating their subsequent play.

The groups swapped over, ran through the same scenarios with similar options and strategies developed. A short water break followed and then my coaching and practice design was tested to see if the boys' good work so far would transfer into the game.

Two even teams were created and then the game's aim of testing the transfer of the previous skills work were clearly stated to the boys. The learning that had emerged and witnessed earlier was restated at this point by the coaches. I then asked the boys to get into a huddle and negotiate what game behaviours in light of the session's focus were would be expected, would be exceptional and finally those that would be

unacceptable. The boys were asked to self-monitor their own and their teammates performance against these criteria which they all agreed upon and were told that they could reset the game at any time if they felt their desired standards were not being achieved.

As the players split to take up their positions for the kick-off I called over Jack, Jimmy and James one at a time. These are my 3 stand out players. Slightly older and more mature than the others at this stage with a slightly more advanced game understanding too. For each I offer an additional individual challenge for them to consider whilst the greater game is going on. A 'game within a game' so to speak.

The game starts and I take up my position at the side of the pitch at the half way point. I stand silently watching play unfold, at first with various degrees of success. I can recognise many of the elements of the practices facilitated earlier. Players communicate well to align their attacking and defensive shapes, to allocate roles and opponents to mark, supporting their teammates forward momentum, recognising and using the space out wide.

Then things start to go downhill. The ball seems trapped in an invisible corridor 5m wide running down the middle of the pitch. Players seem confused, lacklustre in contact and slow in reactions. I start to worry a little, then.....

'Dave! Dave! Can we have a timeout?' Ian calls as he runs past me. My heart leaps. Ian is one of the quietest and youngest boys in the squad. This must have taken a lot of courage from him to take such action. I hope the follow up is successful!

'Sure thing Ian..... Right guys hold it there'. I usher the players to run over. 'Ian, why have you called a timeout and reset?'

'It just isn't working Dave'

'Ok. Why.... And what do you need to change?'

Ian responds instantly. 'We aren't looking around and seeing where the space is. We need to scan more and tell each other where to go and what we are going to do at the breakdown. We need more energy too. We seem tired.'

'Good analysis Ian. Does anyone have any more opinions?'

A few boys speak up. Their teammates nod and verbally agree. I remind the players of their own standards of what they deemed were expected, exceptional and unacceptable behaviours. With these items fresh in the boys minds the game restarts.

For the next 10 minutes the game ebbs and flows through periods of good, poor and occasional exceptional play. All are greeted with my same response - quiet, open, placid body language and silence. I am however busily scribbling away on my notepad listing when different boys' decisions and actions have had a positive or negative influence on their teammates and the game.

As is common with this age group the boys' attention and focus seem to wane. I observe more and more unacceptable behaviours but no-one seems to want to address this in themselves or their teammates. I can wait no longer. 'Time out... Reset needed!' I call.

'OK boys. Why do you think I called a reset? What do you think I've seen from the side' This is an open question to everyone.

As expected the boys know themselves what they have and haven't done. Rather than dwelling I ask the boys to get back into your team huddles and ask them to decide in 2 minutes on what they are going to change and why. I check that their discussions have come to an end then call one player over again to explain the outcome and also let the coaches know what to expect to see in the next passage of play. Play restarts with renewed vigour. Some of the changes seem embedded some are seen fleetingly then they have gone again. Developing skilled players is indeed a long journey and my players and I still have a long way to go, but we do seem to be treading new ground

### **The final team huddle**

Through my teaching and coaching journey I have been exposed to numerous talent development, skill acquisition and motor learning concepts and theories. Initially my training focussed on a simple information processing model (Adams, 1971; Fitts and Postner, 1967; Schmidt, 1975) which required careful practice design, constant repetition, high levels of coach direction, instruction and feedback, and importantly a precise model which could be demonstrated, copied and repeated.

Later as coaching information from around the world became more freely available I adopted a more games based (Bunker and Thorpe, 1987) and dynamical systems approach (Newell, 1986;1991) to my practice. I tried to manipulate constraints on the task, environment or individuals to allow them to create their own movement solutions to the problems (Davids, Button and Bennett, 2008). Here I tried to foster intrinsic motivation, ownership, autonomy and freedom through a very hands off approach. I utilised a guided discovery approach but in retrospect I actually guided my athletes to my own preferred solutions.

**Skill Learning Chain of Sports Coaching**

**Information Processing  
Cognitive Psychology**  
(Narrative One)

(Narrative Three)

**Dynamical Systems: Ecological /  
Developmental Psychology**  
(Narrative Two)

Motor Programs  
Top down centralised control  
Linear

Need to limit perception stimuli  
Structured / organised  
Rule based  
Isolated tasks

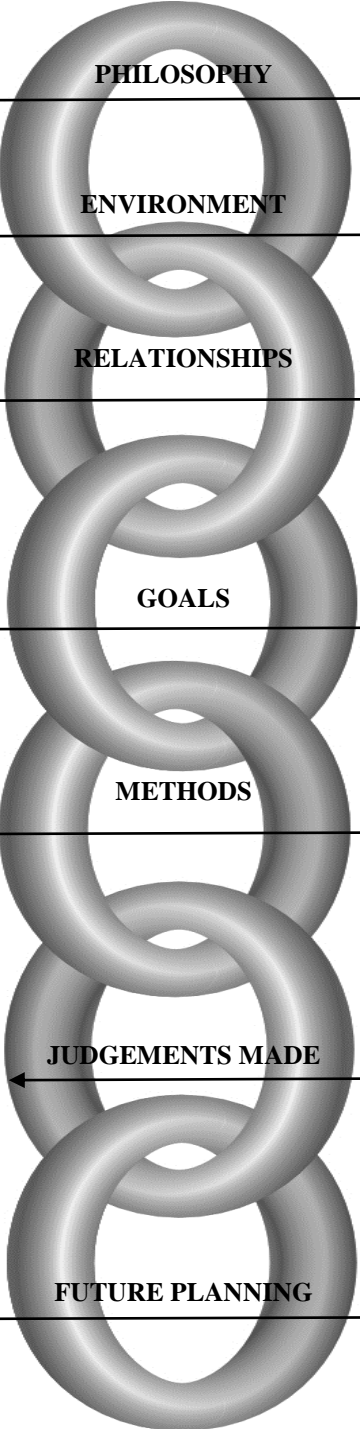
Coach directs and changes area of focus. Coach changes CI of task to add additional layers of necessary cognition. Coach has a 'perfect' model. Player expects to be told  
Basis of extrinsic motivation

Short term acquisition  
Skill retention  
Develop pre-event confidence  
Crisis Management

Block Practice, Repetition  
Coach – perfect model demonstrations, Verbal cues  
Analogies used to direct attention to whole movements  
Augmented feedback – beginning, during, end.  
Enhanced Cognition e.g. rhythm, especial skills

Declarative knowledge  
Procedural knowledge  
Perfect Model – desired pattern recall / performance  
Performance data based against perfect model. Outcome based execution phase of perception  
Decision – Execution model

Tacit Knowledge  
Players' level of autonomy  
Transfer in competition etc.  
Levels of functional variability developed  
Process based – perception and decision phases of Perception – decision – Execution model



Self-organisation  
Decentralised system  
Bottom up - Non-linear

Multi perception stimuli  
Unstructured / messy  
Game based  
Supports exploration  
Multiple integrated tasks

Coach manipulates constraints to enable player to self-organise and find own movement solution  
Player expects choice / autonomy  
Basis of intrinsic motivation

Skill acquisition and long term retention  
Learning to solve performance problems  
Promote creativity  
Effective transfer to competition

Random Practice  
Constraints Led Coaching  
Clarification of Problem  
Analogies used to divert attention  
Self-directed feedback  
Time for reflection  
Mindfulness exercises

Tacit knowledge  
Players' level of autonomy  
Transfer in competition etc.  
Levels of functional variability developed  
Process based – Perception and Decision phases of Perception – Decision – Execution model

Grounded in the specific context, environment and needs of the player. See PJDM  
Driven by player perceived needs  
Focussed on awareness part of perception – Action coupling

Only recently have I been able to find my own coaching path by recognising and utilising different approaches, sometimes diametrically opposed e.g. Cognitive Psychology versus Developmental / Ecological Psychology. I have done this by building my own knowledge and creating my own skills framework based on my previous research into epistemological, learning and values chains (Collins, Collins and Grecic, 2015; Grecic 2015; Grecic and Collins, 2012; 2013; Grecic and Grundy, 2016; Grecic, MacNamara and Collins, 2013). What I present below is a Skill Learning Chain, one which articulates the different choices faced by a coach or PE teacher under the headings I have developed to make sense of my coaching world. The chain itself is not as linear as it appears. Instead I navigate my way through it depending on the different goals, intentions, situations and environments I find myself operating within. Quite often I will jump from left to right and back again as the needs of my players' dictate. I have found it an invaluable tool to formalise my thinking, to give structure to my reflections and to justify the decisions I make in every coaching session. Although, as I have stated many times above, my coaching journey is still far from over, at least now I feel I am finally making some sense of skill.

## Conclusion

### Take home - 'work on'

I have thought long and hard about what my take home message or 'work on' is following my skill learning journey. Really it is a very simple one, 'Always think why are you doing what you are doing and what the end goal is for the players'. Hopefully the above chain will help guide your explorations and help you make your own sense of skill.

## References

- Adams, J. (1971) A closed-loop theory of motor learning. *Journal of Motor Behaviour*, 3, 111-149.
- Armstrong, S. (2017) *Drills are the drugs of coaching: From a recovering addict* [online]. Available at: <http://www.thetalentequation.co.uk/single-post/2017/07/08/Drills-are-the-drugs-of-coaching-from-a-recovering-addict> (Accessed 28<sup>th</sup> October, 2017).
- Atkinson, P. and Delamont, S. (2006) Rescuing narrative from qualitative research. *Narrative Inquiry*, 16, 1, 164-172.
- Bailey, R., Collins, D., Ford, P., MacNamara, A. and Pearce, G. (2010) *Participant development in sport: an academic review*. SportsCoach UK, London.
- Bolton, G. (2010) *Reflective practice: writing and professional development*. Sage, London.
- Bunker, D. and Thorpe, R. (1982) A model for the teaching of games in secondary schools. *Bulletin of Physical Education*, 18, 1, 5-8.
- Collins, L., Collins, D. and Grecic, D. (2015) The epistemological chain in adventure sports coaches. *Journal of Adventure Education and Outdoor Learning*, 15, 3, 224-238.
- Collins L. and Collins, D. (2013) Decision making and risk management in adventure sports coaching. *Quest*, 65, 1, 72-82.

- Cunliffe, A. (2009) Reflexivity, learning and reflexive practice (chpt. 23). In, Armstrong, S. and Fukami, C. (Eds.) *Handbook in Management Learning and Education* Sage, London.
- Davids, K., Button, C. and Bennett, S. (2008) *Dynamics of skill acquisition: A constraints-led approach*. Human Kinetics, Champaign, Ill.
- Ellis, C. and Bochner, A. (2000) Autoethnography, personal narrative, reflexivity: researcher as subject (pp.733-768). In, Denzin, N.K. and Lincoln Y.S. (Eds.) *Handbook of Qualitative Research* (2<sup>nd</sup> ed.). Sage, Thousand Oaks, CA.
- Farrow, D., Baker, J. and McMahon, C. (Eds.) (2008) *Developing sports expertise: researchers and coaches put theory into practice*. Routledge, London.
- Fitts, P. and Posner, M. (1967) *Human Performance*. Brooks-Cole. Belmont, California
- Ford, P., Yates, I. and Williams, M. (2010). An analysis of practice activities and instructional behaviours used by youth soccer coaches during practice: Exploring the link between science and application. *Journal of Sports Sciences*, 28, 5, 483-495.
- Goodson, I. (2014) *Curriculum, personal narrative and the social future*. London, Routledge
- Grecic, D. (2015) *Learning to make the 'right' decisions - the epistemological chain in action: an investigation and guide for elite golf practice*. Unpublished Ph.D. thesis University of Central Lancashire, Preston, UK.
- Grecic, D. and Collins, D. (2012) A qualitative investigation of elite golf coach's knowledge and the epistemological chain. *Journal of Qualitative Research in Sport Studies*, 6, 1, 49-71.
- Grecic, D. and Collins, D. (2013) The epistemological chain: practical applications in sports. *QUEST*, 65, 2, 151-168.
- Grecic, D. and Grundy, A. (2016) Pragmatic research in sport: coaching philosophies in action - a values chain to inform practice. *Journal of Qualitative Research in Sports Studies*, 10, 1, 211-232.
- Grecic, D. and Palmer, C. (2013) Tales from the tee: narrative accounts of being coached in golf. *Journal of Qualitative Research in Sports Studies*, 7, 1, 127-152.
- Grecic, D., MacNamara, A. and Collins, D. (2013) The epistemological chain in action: coaching in high level golf. *Journal of Qualitative Research in Sports Studies*, 7, 1, 103-126.
- Louis, R. and Palmer, C. (2013) My life and the beautiful game. *Journal of Qualitative Research in Sports Studies*, 7, 1, 1-10.
- Maltbie, R. (2017) *Changing the Game Project* [online]. Available at: <http://changingthegameproject.com/about/> (Accessed 1<sup>st</sup> November 2017).
- Markham, A. (2009) How can qualitative researchers produce work that is meaningful across time, space and culture? (pp.131-55). In, Markham, A. and Baym, N. (Eds.) *Internet Inquiry: Conversations About Method*. Sage, Los Angeles.
- Markham, A. (2017) *Reflexivity: some techniques for interpretive researchers* [online]. Available at: <https://annetmarkham.com/2017/02/reflexivity-for-interpretive-researchers/> (Accessed 5<sup>th</sup> November 2017).
- Metcalf, J. (2011) Letting go of the side of the pool. *Journal of Qualitative Research in Sports Studies*, 5, 1, 151-156.
- Newell, K. (1986) Constraints on the development of coordination (pp. 341-360). In, Wade M.G. and Whiting, H.T.A. (Eds.) *Motor development in children: aspects of coordination and control*. Martinus Nijhoff, Dordrecht, The Netherlands.

Newell, K. (1991) Motor skill acquisition. *Annual Review of Psychology*, 42, 213-37.

O'Sullivan, J. (2017) *Way of Champions* Podcast [online]. Available at: <https://itunes.apple.com/us/podcast/way-of-champions-podcast/id1223779199?mt=2> Accessed 2<sup>nd</sup> November 2017).

Palmer, C. *et al.* (2016) Lessons in learning, teachers take note. *Journal of Qualitative Research in Sports Studies*, 10, 1, 75-112.

Palmer, C. (2010b) Addendum, Appendix, Addi-on bit. WARNING: If you are interested in teaching PE don't read this: 'Rose tinted torture and the tale of Wayne Lacey - Physical Education, a force for good at Bash Street School' (Chapter 30: 363-373). In, Palmer, C. (Ed.) *The sporting image: what if - an anthology of creative writing based upon real-life events in sport*. SSTO Publications, University of Central Lancashire, Preston, UK.

Renshaw, I., Chow, J., Davids, K. and Hammond, J. (2010) A constraints-led perspective to understanding skill acquisition and game play: basis for integration of motor learning theory and Physical Education praxis? *Physical Education and Sport Pedagogy*, 15, 2, 117-137.

Schmidt, R. (1975) A schema theory of discrete motor skill learning. *Psychological Review*, 82, 225-260.

Sparkes, A. (2002) *Telling tales in sport and physical activity*. Human Kinetics, Leeds.

Wilkinson, S. (2014) Chicken soup out of chicken poop: not battery farming for champions (Chapter 21, pp. 161-168). In, Palmer, C. (Ed.) *The sports monograph: critical perspectives on socio-cultural sport, coaching and Physical Education*. SSTO Publications, Preston, UK.

Williams, M. and Hodges, N. (2005) Practice, instruction and skill acquisition: challenging tradition. *Journal of Sports Sciences*, 23, 637-650.

## JQRSS Author Profile

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## Reviewer Comments

This narrative of experience told in a rich and engaging way transports the reader, in this case a former PE teacher and 'recipient' of football/rugby Governing Body coaching in his youth, right back to the playing fields and creates an immediate sense of connection to the episodes described. The writing here is underpinned by a powerful honesty which truly captures a journey of self-discovery, re-discovery and the yet to be discovered. It serves as a reassuring reminder that the experts, in this case a coach and teacher, are on a learning journey themselves and that one's practice is and should be, ever-evolving. I'm sure that those new to the coaching and teaching profession will find this narrative incredibly useful and will hopefully pick up where David has left off - to equip learners to think on their feet and reason things out for themselves.