

1 **Introducing children to rugby: Elite coaches' perspectives on positive**
2 **player development**

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10 This research was funded by a CASE studentship from the ESRC's Capacity Building Cluster
11 in Sport, Leisure and Tourism, based at the University of Exeter (RES-187-24-0002), in
12 partnership with the Rugby Football Union. The authors would like to thank Gary Townsend
13 (RFU) for facilitating the introduction to potential participants, and Dr Brett Smith for
14 comments on an earlier version of this manuscript.

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1 Abstract

2 The overall aim of the study was to identify what elite coaches **believed** were the key
3 components for organized rugby union participation during childhood (7 to 11 years old). .
4 Nine elite male rugby union coaches participated in individual semi-structured interviews.
5 Thematic analysis (Braun and Clarke 2006) identified **the importance of an age-appropriate**
6 **competitive games pathway, where more specialized skills were built sequentially on top of**
7 **the foundations of basic evasion, handling and tackling skills. The findings were generally**
8 **supportive of the** principles of the developmental model of sports participation (DMSP; Côté
9 1999). **In particular, elite coaches identified that an emphasis on less structured games**
10 **(deliberate play) and early diversification (sampling) were beneficial for player development**
11 **in the mini rugby years (under 12). However, contrary to a strict interpretation of the DMSP,**
12 **the coaches also identified that appropriate adult involvement and organized competition**
13 **could be beneficial to development in these sampling years.**

14 Keywords: Skill Acquisition, Deliberate Play, Early Diversification, Rugby, Competition.

15 **views on the structure of organized participation during childhood**

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1 Introduction

2 Rugby Union is a complex and structured invasion game where the basic pattern of play is of
3 an alternate concentration and dispersal of players (Greenwood 2003). Within this basic
4 pattern the game has a variety of different methods to restart play (e.g., lineouts and scrums);
5 complex rules for infringements; specialized playing positions; and a high degree of physical
6 contact. The complexity, physicality and structure of the senior game therefore presents a real
7 challenge for the governing body in England, the Rugby Football Union (RFU), when
8 introducing children to the game during childhood (7 to 11 years old). However, while the
9 design of age-appropriate competitive games is a wider issue in organized youth sport (e.g.,
10 see recent report by Football Association 2012), there is little research by which to guide age-
11 appropriate rules changes. The current study sought to initiate enquiry into issues for
12 consideration when introducing children to rugby union, by asking elite coaches to express
13 their views on the structure of organized participation during childhood.

14 While there has been little empirical focus on the structure of organized *competitive*
15 games for children, a large body of research has examined the structure of developmental
16 activities in *practice* (e.g. Williams and Hodges 2005, Côté *et al.* 2007). The developmental
17 model of sport participation (DMSP, Côté 1999) proposes a pathway to participation in sport
18 that consists of four distinct developmental stages: the sampling years (childhood; 5–12
19 years); the specializing years (early adolescence; 13–15 years); the investment years (late
20 adolescence; 16+ years); and the recreational years (adolescence; ages 13+ years). From
21 when children first engage in sport during the sampling years, the DMSP suggests that there
22 are two types of learning activity associated with two different player development pathways.
23 The first pathway highlights deliberate practice activities through early specialization in one
24 sport, while the second focuses on deliberate play activities and sampling a variety of sports
25 (Côté *et al.* 2012). Whether sport participation leads to recreational or competitive

1 involvement, the DMSP highlights that the concepts of early diversification (sampling) and
2 deliberate play should be key components of early childhood sport experience (Strachan *et al.*
3 2011). In effect, children should participate in a wide range of sports, with the focus being
4 primarily on deliberate play activities, such as street football, which are modified versions of
5 adult games with a high emphasis on enjoyment (Côté *et al.* 2007).

6 Research has identified the benefits of an emphasis on deliberate play in childhood in
7 terms of both performance enhancement and psychological well-being. From a performance
8 perspective, a vast investment in unorganized and unstructured play during the sampling
9 years has been associated with future success in team sports (e.g., Weissensteiner *et al.*
10 2009), and the development of expert decision makers specifically (Baker *et al.* 2003, Berry
11 *et al.* 2008). Playing a variety of sports during childhood has also been linked to more
12 positive psychological outcomes than specializing early (Côté *et al.* 2009). For example,
13 university level athletes who had a more diverse sport experience during childhood fostered
14 more positive peer relationships and leadership skills (Wright and Côté 2003). Furthermore,
15 children's motivation to stay involved in sport at a recreational or elite level is largely
16 influenced by positive experiences in the sampling years (Gilbert *et al.* 2002, Côté *et al.*
17 2003, Côté and Fraser-Thomas 2008).

18 The DMSP proposes that not only should children under twelve participate in lots of
19 deliberate play activities, but, they should spend limited time in deliberate practice and
20 organized (formal) competitive activities (Côté *et al.* 2007). Deliberate practice is a key
21 feature of an early specialization approach, where activities are highly structured, effortful,
22 low in inherent enjoyment, and aim to improve performance (Ericsson *et al.* 1993). From a
23 deliberate practice standpoint, intensive practice activities should be introduced at an early
24 age to enable the accumulation of the vast hours of practice required to reach elite status (see,
25 Ericsson 2007). However, early specialization does not always guarantee future success and

1 has been linked to athlete dropout, burnout and decreased enjoyment (for review, see Baker
2 *et al.* 2009). These limitations may be magnified in rugby union where body shape is a key
3 determinant of positional specialization. Children who are advanced in biological maturity
4 are, on average, taller and heavier than their year-group peers (Malina *et al.* 2005a, Malina *et*
5 *al.* 2005b), and these early differences can cause children to be assigned into a specialized
6 position that may not suit their post-adolescent frame. The danger of early position-specific
7 specialization is exacerbated because differences in biological maturity are also influenced by
8 the one-year age difference that can exist between the oldest and youngest players in an age-
9 group team (the ‘relative age effect’; Till *et al.* 2010).

10 The DMSP also postulates that organized competition is unnecessary for children’s
11 development in the sampling years and therefore the model does not explicitly consider the
12 structure of this activity (Côté *et al.* 2007). However, a significant proportion of the overall
13 time children spend in sport-related development activities in soccer (Ford and Williams,
14 2012a) and ice hockey (Soberlak and Côté 2003, Wall and Côté 2007) is made up of
15 participation in organized (competitive) games. It may therefore be naive to ignore the impact
16 of this form of activity on the development of children involved in organized sport. Indeed,
17 with over 700 clubs currently participating in regular organized competitive mini-rugby
18 union matches (under-7 to under-11) in England alone, the impact of (inappropriate)
19 competition on player development needs to be considered. The current rules of mini rugby
20 union (RFU 2011) appear to be aligned with an early specialization pathway, with all the
21 highly specialized skills from the full adult version of the game (such as scrums and lineouts),
22 introduced from under-9 onwards, following two years of unstructured, non-contact rugby
23 (Tag rugby).

24 There have been recent calls for an increase in the amount deliberate play activities
25 within organized sport programmes (Côté *et al.* 2011). While the emphasis has been on the

1 structure of practice, the overarching principles behind the DMSP (early diversification and
2 reduced structure) could feasibly guide the development of organized competitive rules for
3 children in the sampling years. A competitive setting that has less structure (adult enforced
4 rules and positions), and more of the qualities of deliberate play, should provide a more
5 supportive environment for child development through sport. For the RFU, both the proposed
6 performance *and* psychological benefits of such an approach are promising, because of its
7 objectives to increase recreational playing numbers, as well as develop players on an elite
8 pathway. The overall aim of this study was therefore to identify what expert coaches believed
9 were the key components for rugby participation during childhood. To achieve this aim the
10 study was directed by the following research question: How do expert coaches make sense of
11 player development through mini rugby?

12 **Methods**

13 Elite coaches' opinions of participation in mini rugby were investigated through qualitative
14 semi-structured interviews, and the data analysed using thematic analysis (Braun and Clarke
15 2006). A qualitative approach was adopted because there is (to the authors' knowledge) no
16 published research exploring the development of appropriate rules for organized sport during
17 the sampling years. The aim of the study was to gain a deeper understanding from the
18 perspective of individual coaches rather than to generalize results (Maykut and Morehouse
19 1994). The research was located within a naturalistic and interpretive paradigm to gather rich,
20 detailed and complex accounts of coaches' opinions of the development of rugby skills and
21 rugby knowledge during childhood in order to inform practice and theory (Kvale and
22 Brinkmann 2009).

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1 *Participants*

2 The participants were nine elite male rugby union coaches whose ages ranged from 32 to 65
3 years ($M = 42.33$, $SD = 9.02$ years). An elite coach was classified as an individual who made
4 his living from coaching and had experience of coaching at English Championship level or
5 above. During the interview period the participants were coaching at international ($n = 3$),
6 European ($n = 2$), English Premiership ($n = 1$) and English Championship level ($n = 3$).

7 **Seven coaches had experience of coaching mini rugby, while three of these were involved**
8 **with coaching mini-rugby teams when the interviews were conducted.**

9 *Design and Procedure*

10 Ethical approval was granted by the University Ethics Committee and a sample of nine elite
11 coaches was chosen using a purposive approach to ensure access to knowledgeable people
12 (Cohen *et al.* 2011). The first author is a level three rugby coach whose “insider identity”
13 within the English coaching community enabled him to approach “gatekeepers” who helped
14 facilitate access to the coaches (Kvale and Brinkmann 2009).

15 Prior to the interviews, participants were sent an information sheet by e-mail giving
16 them an outline of the research study and time to raise any concerns and prepare for the
17 interview. Informed consent was provided by all participants to audio record the interviews
18 and their anonymity was preserved. Each of the semi-structured individual interviews **were**
19 **audio recorded and** lasted between 30 and 70 minutes; and took place in the autumn over a
20 two-month period at a time and venue selected by participating coaches. An interview guide
21 was used that included an outline of topics to be covered and **specific** questions (Kvale and
22 Brinkmann 2009). The guide was based on themes emerging from game and player
23 development literature, such as the DMSP model, and focused on coaches’ opinions of player
24 development; key aspects of competitive mini rugby matches; and player retention. **Themes**

1 and questions were written in advance, **although the** exact order of questioning **sometimes**
2 **varied between participants as themes naturally emerged at different stages of the interview**
3 (Cohen *et al.* 2011). Initial questions **focused on coaching background and** were open and
4 general, allowing the participant to be descriptive and to **build rapport (e.g., ‘Do you have a**
5 **coaching philosophy? ‘What is your main coaching achievement?’)**. This also allowed the
6 interviewer to demonstrate firm knowledge of the subject which is essential in interviews
7 with elite individuals to gain symmetry in the interview relationship, **gain credibility, and**
8 **increase rapport** (Kvale and Brinkmann 2009). The more searching “how” and “why”
9 questions were kept for either later in the interview or for when it was an appropriate time to
10 ask (Cohen *et al.* 2011). Prompts were used to clarify subjects or questions, while probes
11 added depth to answers.

12 ***Data Analysis***

13 The interviews were transcribed **verbatim** by the first author and pseudonyms were given to
14 each coach to ensure anonymity. A six-phase inductive thematic analysis procedure was
15 conducted on the interview transcripts to help gather and understand elite coaches’ opinions
16 of the key components for age appropriate competitive rugby matches (Braun and Clarke
17 2006). Thematic analysis was used due to its theoretical freedom and flexibility and its ability
18 to provide a wide range of analytical options (Smith and Sparkes 2012). By exploring the
19 themes that emerged from the participants’ comments, a rich, detailed and complex account
20 of the data was possible (Braun and Clarke 2006).

21 An inductive analysis approach was applied to ensure that the themes were not
22 restricted by a pre-existing coding frame and emerged from the data (Braun and Clarke
23 2006). Each of the six stages was documented clearly in order to ensure the thematic structure
24 was not influenced by any of the author’s pre-conceived ideas. **However, as the DMSP was**

1 used as a framework for questioning, there was a possibility that the codes may have been
2 influenced by the questions asked. During the first two steps all nine transcripts were read in
3 order to produce as many categories as possible, and in the third stage this list was condensed
4 to produce candidate themes. The fourth phase involved refining the candidate themes by
5 identifying links or relationship between the themes. Patton's (2002) dual internal
6 homogeneity and external heterogeneity criteria was applied to ensure that data within a
7 theme should be similar and fit together meaningfully and the differences between themes
8 should be distinguishable and clear. The 'coaching background' theme was removed at the
9 fourth phase as it was decided it was not relevant to the research question. During the
10 remaining two phases, themes were merged when appropriate. For example, 'coaching mini
11 rugby during games' and 'positive player development' themes were merged to create an
12 'adult involvement' theme.

13 The importance of judging the quality of qualitative inquiry has emerged as an
14 important theme in the sport, exercise and health literature (see Smith 2009, Sparkes and
15 Smith 2009 for detailed discussions). In this study, the criteria for judgment was informed by
16 a relativist position, where evaluation is considered through a list of characteristics as
17 opposed to a preordained and universal standard (Sparkes and Smith 2009). Characteristics of
18 the research such as; the worthiness of the topic; the rigour applied in the collection and
19 analysis of data; the credibility of the researchers; and the potential contribution of the work,
20 were considered, and should allow readers to draw their own conclusions in terms of the
21 validity of the research (Tracey 2010). We feel that the study can be deemed worthy as it was
22 relevant and timely, considering the interest in the design of age-appropriate competitive
23 games in a variety of sports in England (e.g., Association Football, Rugby League). The
24 conclusions on playing competitive sport make the study interesting as it contrary to widely
25 held beliefs and assumptions on competition. We believe that rich rigour was achieved and is

1 evidenced through the data collection and analysis procedures outlined and the rich data
2 presented in the results. Credibility was established by triangulating the coaches' comments
3 to produce themes, and through respondent validity, where eight of the nine coaches verified
4 their quotes. All coaches were also ready to waive their anonymity if the RFU wanted to
5 reproduce their comments in published documents. Finally, the results of the research could
6 have practical benefit by assisting the RFU in developing the structure of organized
7 participation in mini rugby.

8 **Results**

9 The analysis identified **five** themes associated with competitive activities within a player
10 development pathway in rugby union. These themes were **Introducing Competition**, High
11 Involvement, **Scaffolding Skills (Introducing Contact)**, **Adult Involvement**, and Early
12 Diversification (Sampling).

13 ***Introducing Competition***

14 The first theme emerging from the data was that all the coaches believed it was appropriate
15 for children to play competitive rugby games during childhood. For example, Eric explained
16 the benefits of starting with an introductory competitive game (Tag rugby):

17 I have no problem with five and six year old playing tag personally. I don't see that as a
18 problem as long as emotionally they are able to deal with that and they're well coached and
19 people understand that they are working with five year olds and the length of session, the type
20 of session and nature of the session reflects their age and they are playing within their own
21 age profile. I don't see why five, six year olds can't run around passing a rugby ball.

22 The coaches emphasised that it was important that these competitive games were
23 played within an appropriate competitive structure. Coaches' opinions varied however, with
24 some suggesting that games should be competitive but not played to win tournaments or

1 cups. Frank explained that in competitive games “you’re going to keep score and that’s not a
2 problem. Somebody will win and someone will lose, but handing out all these medals and all
3 that is nonsense.” Eric added, “I think every game should be competitive. I don’t mean they
4 are playing for cups, but I think there needs to be a winner and a loser because I like
5 competition. I believe it’s how you develop lots of different attitudes.” Seth believed that
6 organised competitions were a waste of time because of the effect they have on adults:

7 It makes coaches select what they perceive to be their best team at nine years of age, which
8 you can’t identify who’s going to be the best player at that age. It makes coaches want to take
9 less risks, because they want to win and I think kids want to win anyway; so there’s no point
10 in putting a trophy at the end of it. I think competition is healthy but when kids play football
11 in the playground against each other they want to win - there’s no league or county cup
12 competition on the end of it, it’s just their competitive instincts. I think they should play
13 games but you should let the inner competitive spirit kind of dictate it.

14 Some of the coaches felt that at the older mini-rugby levels a minimal amount of
15 tournament rugby was acceptable as it provided learning opportunities to encourage positive
16 behaviours. Henry said, “they need to learn to deal with defeat, they need to learn how to win
17 properly, but it doesn't need to be the be all and end all of every time they play the game.”
18 Lee offered similar opinions:

19 I think all the values that you pick up in life in terms of, you know understanding how to win
20 with humility, lose with good grace, deal with disappointment, be humble when you win all
21 that sort of stuff. I think that ultimately rugby and life is competitive and you want to see that
22 people are prepared to roll their sleeves up a bit in adversity; but that's not to say that I would
23 overdo it at under 11's by any stretch of the imagination.

24 Although some coaches encouraged playing games in tournaments, it was felt that
25 they should be the exception rather than the norm. According to Henry, players in

1 competitive games should “be performing week in week out to enjoy playing the game and
2 love scoring tries.” Hugh expressed similar feelings, “When you are dealing with eight, nine,
3 ten year olds they should be promoting fun, enjoyment, camaraderie, team ethics. There’s
4 enough about winning later on when they’re fourteen, fifteen, sixteen.”

5 *High Involvement*

6 The **second** theme emerging from the data was that elite coaches identified high involvement
7 as an important element for everyone taking part in competitive rugby union matches. They
8 believed that playing unstructured small-sided matches at mini rugby level and **scaffolding**
9 **the introduction of key elements** at each level was the key to providing high involvement for
10 all players. Frank suggested that:

11 We need to de-clutter the game, less laws, we need to introduce contact later, introduce
12 kicking and various other things at an appropriate time and really focus on catch, pass
13 decision making....We start reasonably well with tag and one or two other things and then we
14 just, we just put on too many layers.

15 According to Mike it was important that we should not be looking “for the game that
16 the adults play” and instead asking, “if they were doing it as a group of kids in the street what
17 would they be doing?” He added:

18 So why have 15 a side or 11 a side? You know, why not be running five, six, seven a side
19 little games in small areas with the ball the right size that they can make sure they can control.
20 And if you've got that high involvement then you get the natural skill development which you
21 can then build on later.

22 Although there were slight variations on the ideal number of players for each team at
23 different age levels, there was a consensus that having smaller numbers on each side would
24 lead to an increase in the number of involvements for each player. Seth explained:

1 It's not rocket science. The more somebody can get a ball in their hands and make decisions
2 the better they are going to get at it and if you are playing eleven a side, thirteen a side ... you
3 watch some of the games, some kids touch it once or twice in half an hour so. I think smaller
4 sided games ... also giving them enough space, but just trying to get young players as many
5 chances to get their hands on the ball, make decisions and make as many passes as they
6 possibly can and not stereotype at a young age who plays where.

7 With higher involvement for all players during games, the coaches felt that it would
8 also ensure a greater opportunity for all individuals to develop a core set of fundamental
9 movement skills, such as passing, catching, running, and dodging, alongside improving game
10 understanding.

11 I think ideally it would be sort of multi dimensional people who are comfortable handling the
12 ball. It's not just about handling, but have the core skills all of an exceptionally high standard
13 so running, passing, tackling really, rucking are really important; and understanding the
14 techniques and the tactics required in those areas without worrying too much about the
15 positional specifics, because those will come. (Eric)

16 As well as having a positive benefit on the skill and tactical development of players it
17 was also suggested that having unstructured games with high involvement would have
18 psychosocial benefits. One of the coaches believed that it was crucial for higher
19 participation levels and to get children of all shape and sizes involved in the game:

20 For me, it's really important that we give the kids a really positive experience. That they
21 contribute. That they are allowed to handle the ball. That they are encouraged to run and pass
22 from a young age. They are encouraged to support one another. They are encouraged to
23 defend in a way that the attack is put under pressure. And I think the more we can create a
24 sport where kids of all ages and both sexes want to play for as long as they can, we're just

1 going to produce a far bigger number of kids who love the game and are competent to a level,
2 because they are involved (Richard).

3 *Scaffolding Skills - Introducing Contact*

4 The **third** theme that emerged saw the coaches identify the importance of introducing contact
5 skills in competitive small-sided matches at the right developmental stage during childhood.

6 Henry explained:

7 I just think it's vital they get it right because the current system is so heavily weighted to big
8 kids, powerful physically developed kids at a young age; that we are probably losing a lot of
9 kids that are skilful players just because of that element of the game that they're not
10 particularly good at.

11 All coaches identified contact skills as the main strength of the players produced by
12 the current development pathway, due in large part to their physical capabilities. As Richard
13 said, "the strengths of the players at the moment are their strength, they are very strong," and
14 Eric added, "I think an obvious area of standout would be their physical ability." For some
15 coaches this physical aspect was to the detriment of game understanding and decision-making
16 skills, where according to Hugh, current players at the elite level, "are tending to lack a bit of
17 decision-making and tactical nous, game sense or whatever you want to call it." While
18 Henry felt that, "the one area that they tend to be lacking is in decision-making and self-
19 reliance on the pitch and being able to make decisions for themselves."

20 Although all participants believed that contact skills should be introduced through
21 tackling at the appropriate age in small-sided games, it was essential that it was not to the
22 detriment of developing the core technical and tactical skills.

23 I think they should be spending time on game space, space awareness, passing, catching,
24 running, you know, two v ones, three v twos. I think once they develop a little more

1 physically they gain a little bit more confidence and so I think that should come into it a little
2 bit later. (Hugh)

3 If you're developing them at the expense of that awareness, and fun and speed of movement
4 then it's probably a negative. (Bob)

5 For the majority of coaches, introducing children to basic contact skills (i.e. tackling)
6 at around the under-9 level was essential, with Seth explaining that, "the first part of the
7 contact process really is the tackle in open play so go to that first and let them get proficient
8 at that." Eric believed that, "the earlier you can teach them to tackle the easier it is and the
9 more likely they are to tackle." For Lee introducing the tackle correctly was crucial to the
10 overall development of players' contact skills.

11 I think it is the foundation level of confidence a child needs to have to enjoy rugby. I think
12 that if you can give them the confidence to master the art of tackling then I think as a
13 consequence the rest of the physicality of the game will become less threatening.

14 Although the coaches were supportive of introducing contact skills through tackling
15 they were critical of the current rules of games where all specialized set-piece skills (scrum
16 and lineout) and contact breakdown skills (rucking and mauling) are introduced from Under-
17 9 level. As Lee explained, "At the moment the game jumps up in too big a step and we never
18 get the foundations in place: tackle, pass, catch, run, before we are onto the next thing."

19 Frank added:

20 It's too big a step, too big a jump and it's not concentrating and what we should be
21 concentrating on at under-9s which is a continuation of catch, pass, offload and just
22 introducing the tackle in sympathetic safe way.

23 **Competitive scrums** and lineouts were acknowledged as important aspects of rugby
24 union from adolescence onwards, however they were seen as late specialization skills and an

1 unnecessary part of competitive games played at mini rugby level. Henry felt that scrums and
 2 lineouts “just slow the game down - I think it happens enough in the senior game”, and
 3 Richard explained, “I would do my utmost to get rid of scrums and lineouts because they (i.e.
 4 coaches] take too long coaching them.” Eric added:

5 I don’t think at a young age under-9s, under-10s, under-11s that they are going to learn
 6 anything technically, because there’s no lifting in any way [in the lineouts] and the scrums
 7 basically are a chance to put players together [no competition].

8 Although some coaches explained that they could see the benefits of uncompetitive
 9 scrums as a way of restarting play, overall it was felt that scrums and lineouts were not
 10 needed during the sampling years. Frank said that, “I wouldn’t have a lineout until they are
 11 post twelve,” while Henry explained that, “I don't think they need to start doing scrums or
 12 lineouts until they are 14.” Seth summed up the general feeling explaining that the game at
 13 mini rugby level needed to have high involvement, be faster moving with the ball in play for
 14 longer. He added that it would:

15 Also develop them into more intelligent rugby players because it’s the same with any
 16 learning, any skill or revising for exams at school the more they do it the better they get at it.
 17 If you’ve got scrums, lineouts, rucks, mauls it takes significant chunks out of the game where
 18 they could be learning how to pass before contact, and avoid contact to make decisions.

19 *Early Diversification*

20 There were two aspects that emerged from the third theme identified – early diversification -
 21 and these related to both the micro situation (within rugby) and the macro situation (within
 22 sport in general). The first was to maintain early diversification in rugby by encouraging
 23 players to play in a variety of playing positions, and the second was early diversification
 24 through playing a variety of sports during childhood. It was suggested by some of the coaches

1 that the current competitive games structure can lead to early position specialization of young
2 players, which can have a negative **impact** on development. Richard explained:

3 What happens then when they get scrums and lineouts is **[at under-9]**, and again excuse the
4 politically incorrectness, they go you're a fat kid you're a prop, you're tall kid you're second
5 row. You're going to practice scrums and lineouts while the backs practice moves which
6 involves running and handling. So all of a sudden you've separated the team in half, you
7 continue to do some sort of skill development with these and with these they are doing
8 something they can't really compete at until they are 18.

9 Eric felt that from a young age, "I certainly wouldn't pigeon hole them," and that it
10 was essential to give, "people opportunities to gain experience and develop in lots of different
11 positions." Seth added that, "I think you have to get position specific eventually because it is
12 a very much a position specific sport but until maturation's been fully reached." It was
13 highlighted that many of the elite players were playing in a different position today from
14 when they started playing the game and that it was best to have a game that allows players to
15 develop core skills applicable to all positions. As Frank explained:

16 Very few players especially going at the top level stay in the same position. So we went
17 through last week. Out of the ten best hookers coming through, nine of them didn't start at
18 hooker, turned there very, very late **[15 years old or older]**. So we don't need to be pigeon
19 holing them, so if tight heads have played a little bit at inside backs, inside backs have played
20 it'll give them an understanding and appreciation of different positions very early. And to
21 come back to my other point players that are being produced positionally they are quite strong
22 but their core skills are poor especially the forwards.

23 Alongside early player position diversification, it was emphasized by coaches that a
24 key element during childhood should be sampling or taking part in a variety of sports.

25 Although they were supportive of players participating in competitive rugby matches **at mini-**

1 **rugby level**, it was believed that playing different sports **during childhood** would have
2 positive results for the technical, physical, and psychological development of rugby players.
3 It was suggested by Mike that sticking solely to rugby from a young age was detrimental for
4 player development.

5 I think my biggest concern, obviously when the game went professional is that there is a huge
6 amount of players just to stick with one sport or just to stick with rugby. And I firmly believe
7 that you know up to the age of 16 you know they should be playing football, cricket,
8 basketball, athletics...The danger is that you know you get players thinking only one way and
9 I think a multisport, multiskilled approach for me is still very important and particularly for
10 decision making.

11 This multisport approach was also highlighted by Bob who identified a number of
12 advantages of sampling a variety of sports from **childhood**. He explained that any opportunity
13 to, “run around looking for space, movement, is going to improve you as a rugby player.”

14 Football is a classic one isn't it, you know playing football, your best twelve, thirteen year old
15 backs tend to be guys who've played football since the day dot and are quite good and
16 competitive at it and they have that ability to kick the ball, see a bit of space, general
17 movement, can control things that are happening around them. So I'm all for that. I almost
18 think, almost think rugby's probably a bad sport for you at a young age because everything is
19 right in your face, and it's shutdown time all the time, shutdown time, shutdown time. You're
20 always being closed down and its helter skelter, things are flying at you all the time.

21 Frank also believed that, “all sports have different skill sets which in the bigger
22 picture, they just make the player a better all round player,” while Hugh encouraged his
23 children to play as many sports as possible.

24 If they play cricket, they learn a bit of etiquette and they learn a little of individual and team
25 stuff ethics. Football, it's about passing and moving into space, it's about setting up a goal for

1 somebody else. You know, I reward my boys for setting up somebody, assisting somebody to
2 score rather than scoring.

3 *Adult Involvement*

4 The final theme to emerge highlighted the importance of the role of adults in providing
5 positive psychological and social experiences during competitive mini rugby matches. The
6 importance of creating an enjoyable and fun game environment for children was identified as
7 crucial by all coaches. Henry expressed that it was the “basis on what they build their
8 participation in the game. I think it's got to be especially for kids, they've got to enjoy it
9 otherwise they shouldn't be playing.” At mini rugby level Seth believed it was crucial,
10 “because it increases retention and, it keeps kids in the game for longer, which in turn gives
11 them more hours practice, and develops them into better players.”

12 *The role of the mini-rugby coach during matches was seen as a crucial element in*
13 creating this positive environment for player development. The behaviour and philosophy of
14 the coach was seen as key by Eric who said that, “Unfortunately it is the coach’s behaviour
15 that moulds and reflects the team as opposed to the other way around.” Hugh described
16 negative behaviour he had experienced, “Coaches thinking they’re Graham Henry or Warren
17 Gatland on the sideline when you are dealing with eight, nine, ten year olds when really they
18 should be promoting fun, enjoyment, camaraderie, team ethics.” Communication during
19 matches between coach and player was seen as crucial and many of the elite coaches
20 identified the constant shouting during matches as a negative element. As Eric explained, a
21 touchline coach needs to give, “some verbal encouragement about the positive things they are
22 seeing rather than ‘tackle him’ which is obviously a regular Sunday morning shout and one
23 I’m sure I’ve done myself but it’s not that productive.” According to Frank the constant

1 communication from coaches telling children what to do during matches was having a
2 negative impact on performance.

3 The big drama I have with kids coming through is their ability to communicate is significantly
4 poor year on year it's getting worse, and worse, and worse. But part of the problem is we're
5 having someone communicate for the kids especially in our sport - pass, pass, tackle – shut up
6 man they'll work it out, they're not stupid.

7 It was identified by the elite coaches that the key to positive touchline behaviour was
8 to provide positive encouragement, support performance by giving feedback at appropriate
9 times, and allow the players to work out things for themselves during games. As Richard
10 explained:

11 Their roles are to support and to observe and then feedback in no more than either one or two
12 things at a time. I would say words of support and encouragement rather than shouting and
13 direction...Let them discover it, because if coaches can control themselves get them on the
14 sideline just let the kids play.

15 As well as encouraging fun and enjoyment, the role of adults as match official was
16 identified as a key factor in promoting a positive environment and developing players during
17 small-sided games. Instead of having a referee strictly applying the laws of the game it was
18 suggested by the elite coaches that the person officiating the game should use it as an
19 opportunity to coach the players. Richard felt that, "even at the World Cup now referees are
20 coaching" and Eric believed that the best referees applied this approach.

21 What I see at any level of the game is the best referees' constantly talk to the players. So even
22 at international level it's more get onside, hands away or roll away or leave it; they are
23 coaching the game to allow it to flow rather than penalizing.

1 Having the coach/referee on the field during games at mini-rugby level was seen as an
2 ideal situation to assist the development of players. Richard explained:

3 There is a great opportunity with those games to actually to start to educate, and to talk to kids
4 and at the break get a perspective from both sides. Then get the referees perspective; or we're
5 going to 5 minutes now to discover what the back foot is and what you can and can't do.

6 It was identified that some players struggle to connect the sessions done in practice
7 with the game and that the match environment provides an ideal learning opportunity. As Lee
8 suggested:

9 Their best learning is often in the game and the ability to stop the game then to explain to the
10 players what was good about a certain passage of play or what wasn't as good and what they
11 might need to think about both sides from a referee's point of view would be excellent.

12 However, coaches expressed caution if a referee/coach approach was used to assist
13 with the players' learning. According to Richard it was, "essential that there is somebody in
14 the middle has an empathy with their development and can actually talk them through and
15 also question them." An individual telling a player what to do was seen as negative to a
16 player's development, as Bob explained; "If you've got a guy running around going pass it,
17 pass it, pass it, it defeats the object a little bit." It was stressed that it was essential that the
18 person officiating had to have the correct coaching philosophy and know how and when to
19 apply the best learning techniques in practice.

20 I think intervention's key to good coaching but it's knowing instinctively when to intervene
21 and actually when to let them get on with it. Sometimes I think you can intervene when they
22 would have worked out for themselves anyway, so it depends what the intervention is. If it's
23 to stop the game and tell them he should have passed to this lad because there was a two v
24 one I would probably say don't worry about it (Seth).

1 Discussion

2 The current study sought to initiate enquiry into the effective introduction of children to
3 participation in organized rugby union, by asking elite coaches to discuss pertinent issues
4 with the current system and suggest potential improvements. The themes that emerged from
5 these discussions generally supported the principles of the DMSP model (Côté *et al.* 2007),
6 with an emphasis on early diversification and deliberate play through unstructured small-
7 sided games being lauded. However, the coaches also discussed the importance of
8 *appropriate* adult involvement and competitive experience, which are generally considered to
9 be anathema to the principles of the DMSP (Côté *et al.* 2007). The five high order themes
10 that emerged from the data were Introducing Competition, High Involvement, Scaffolding
11 Skills (Introducing Contact), Adult Involvement and Early Diversification (sampling).

12 The elite coaches reported that competitive matches could play a key part in an
13 effective pathway for player development during childhood. DMSP purists might argue that
14 playing competitive organized sport is linked to early specialisation (Baker *et al.* 2009); and
15 should not play a significant part in the development process until adolescence (the
16 specializing years; 13+). However, the coaches' opinions indicate that player development
17 through competition is a complex process and that a strict application of a dichotomy
18 between 'pure' sampling via backyard games, and early specialisation via organized sport,
19 may be too simplistic. This view is supported by recent research examining the
20 developmental activities of elite child soccer players, which also did not fit the DMSP
21 definition of early diversification (Ford *et al.* 2009, Ford *et al.* 2012a, Ford *et al.* 2012b).
22 Rather, Ford and colleagues proposed an early *engagement* model, which recognizes that,
23 while elite soccer players may specialise early during childhood, the focus is still on high
24 amounts of deliberate play activities during the sampling years. While the coaches in the
25 current study supported the benefits of early engagement through playing organized rugby

1 games, they also supported the early diversification principles of the DMSP on both a micro
2 (the structure of rugby games) and macro (sporting involvement in general) level.

3 At the micro level, the coaches felt that the organized games should be modified, less
4 structured versions of adult rugby (in tune with principles of deliberate play), where children
5 were not pigeon-holed into set positions. Furthermore, the emphasis on winning matches and
6 trophies should be minimized, with the emphasis placed on enjoyment and inherent
7 competition. At the macro level, the coaches were also supportive of the potential for
8 developing players' physical and psychological skills through the sampling of a variety of
9 sports, and not specialising in rugby alone. Previous research has indeed identified that a
10 multi-sport, sampling approach during childhood is associated with both improved
11 fundamental motor skill development (e.g., Baker *et al.* 2003) and decision-making expertise
12 (Berry *et al.* 2008). Research has also suggested that children who participate in a variety of
13 sports are more likely to have enjoyable experiences and have increased motivation to
14 continue to participate in sport (Côté *et al.* 2007, Wall and Côté 2007, Côté and Fraser-
15 Thomas 2008).

16 Contrary to the early diversification pathway of the DMSP, which proposes that there
17 should be limited if any adult involvement in children's deliberate play activities (Côté *et al.*
18 2007), coaches in the current study were supportive of appropriate adult involvement during
19 the sampling years. Specifically, the coaches felt that, as both coaches and referees, adults
20 had a potentially powerful role in the development of their players' technical, tactical and
21 psychosocial skills (McCarthy and Jones 2007, McCarthy *et al.* 2008, Fraser-Thomas and
22 Côté 2009). Positive and encouraging touchline behaviour was viewed as important, and
23 research suggests that the modelling of appropriate behaviour during competition does play a
24 crucial role in influencing the behaviours and attitudes of children (Fredricks and Eccles
25 2004). It has been suggested that the key outcomes for coaches working in the sampling

1 years, should be the promotion of perceived competence and confidence in players through
2 effective communication (Cote *et al.* 2010). However, the elite coaches in the current study
3 were able to highlight occasions when adult involvement was less than ideal, and other
4 research evidence supports such comments. Indeed, there is a tendency for childhood team
5 sports coaches to use more negative comments than positive comments in competitive
6 environments (Walters *et al.* 2012). Additionally, over-coaching during games - having
7 constant instruction shouted, such as “spread out” and “run straight” – can have a detrimental
8 effect on children’s game experience (Coakley and Pike 2009). It is therefore important that
9 coaches develop an appropriate environment that allows players to develop their own playing
10 and communication skills on the field (Adler and Adler 1998).

11 With regards the structure of the game itself, the elite coaches were supportive of a
12 focus on simplified, less structured games, with increased structure and complexity being
13 gradually introduced over the sampling period. There was concern that the current system
14 specialised too quickly, moving from a very simple, unstructured game with no contact at
15 under-8, to a highly structured and technically demanding game at under-9. With this
16 pathway, the fundamental skills of evasion, ball handling and tackling have little opportunity
17 to be reinforced and instead, children are introduced to new specialised skills relevant to their
18 position (as determined by their size, speed, early aptitude etc.). This can also lead to a
19 greater emphasis being placed on complex contact skills that can further magnify the physical
20 differences that exists between players due to maturation and the relative age effect. The
21 coaches discussed the importance of ‘scaffolding’ skill learning, by gradually introducing
22 technical skills at a developmentally appropriate age level (Wood *et al.* 1976). While
23 scaffolding skills via manipulation of age-appropriate rules is not explicitly consistent with
24 the principles of deliberate play and early diversification, the coaches’ support for small-

1 sided games, with high player involvement, limited structure, and no playing positions, is
2 (Cote *et al.* 2007).

3 It was suggested that encouraging less structure and promoting skill development
4 during matches would increase the opportunities for *all* players to embed fundamental
5 movement and tactical skills during this critical childhood period for skill development (e.g.,
6 Maude 1996). The coaches agreed that small-sided games are crucial to encourage high
7 involvement for players' skill development. This is consistent with previous research that has
8 shown that small-sided versions of invasion games can encourage high player involvement,
9 with increased opportunities for scoring, basic skill development, and decision-making
10 (Fenoglio 2004, Berry *et al.* 2008, Burton *et al.* 2011). Sampling different playing positions
11 was also thought to be important, and this is congruent with an early diversification strategy
12 at the micro level. Coaches therefore expressed an interest in seeing children experience as
13 much diversity in their sport participation as possible; both inside and outside of rugby, and
14 discussed the performance and psychosocial benefits of this approach.

15 It is evident that the coach-generated themes discussed in this article do not fully align
16 with the DMSP's strict interpretation of sampling and deliberate play (i.e. no adult
17 involvement and no organized competition). This variance from the framework can be
18 interpreted in two ways. First, the DMSP may represent a philosophical ideal to be strived
19 for, but one that is difficult to achieve within the current sport participation landscape where
20 school and local sports clubs seek to thrive. If children are going to play organized sport, then
21 it is important that their experience is as developmentally appropriate as possible. As the elite
22 coaches suggest, some of the elements of a sampling pathway for young children can be
23 promoted within organized games, with careful consideration of the rules governing
24 competition. Within an environment where fewer children are playing backyard games
25 (Coakley and Pike 2009, Weissensteiner *et al.* 2009) it becomes even more important to focus

1 on appropriate organized sport participation. Second, there is an argument that backyard
2 games are not a panacea for skill and psychosocial development (Coakley and Pike 2009). As
3 with organized sport, there is the potential for a few players to dominate involvement;
4 something that can be mediated with the intervention of a skilled coach in organized practice
5 and competitive settings.

6 While the results are likely to provide useful guidance to the RFU as they seek to re-
7 develop the rules governing the current developmental pathway in rugby union in England,
8 the themes do need to be interpreted with caution. First, as the interviewer and participants
9 are all rugby coaches, there may be a bias towards coaching-related themes and the value of
10 organised rugby participation. In combination with a focus on critiquing the current player
11 development structure, this bias may explain why themes were incremental to a degree. For
12 example, while the DMSP suggests that the negative influence of inappropriate adult
13 involvement and adult-driven competitive structures can be negated by allowing children to
14 just play non-supervised backyard games, the coaches preferred to consider this issue in
15 terms of more supportive adult involvement. As some of the issues raised (e.g., competing in
16 more than one organized sport) need to be considered within a more general framework of
17 children's sport participation, future research might seek to explore the opinions of parents
18 and children.

19 Second, while a theme of incremental skill introduction emerged, it was not the aim of
20 the study to explore explicitly *when* during development specific skills should be introduced.
21 The interviews tended to focus on concerns with the introduction of multiple specialised
22 skills in under-9 rugby, at the expense of consolidating the key skills developed during Tag
23 rugby at under-7 and under-8, as this emerged as a perceived concern with the RFU's current
24 development pathway. However, the coaches expressed opinions on whether some skills
25 should be introduced during or after the sampling years, and this is clearly an interesting area

1 for further exploration. At present there is limited enquiry in the skill acquisition literature
2 that attempts to examine optimal periods for motor skill acquisition during late childhood,
3 adolescence.

4 **Conclusion**

5 The current study initiated enquiry into the question of how children should be introduced to
6 competitive rugby union during the sampling years. By using qualitative semi-structured
7 interviews, rich, detailed and complex accounts were gathered from elite coaches on the key
8 components of a developmental pathway for competitive games during childhood. The
9 strength of such an inductive approach is that themes emerged from the data that did not
10 explicitly match the framework (Côté 's DMSP) on which the research questions were
11 developed. Indeed, while the participants did discuss the importance of limited structure for
12 mini-rugby games; high involvement for all players and the sampling of other sports, they
13 also highlighted the role of appropriate adult involvement and organized competition, and the
14 gradual introduction of specialized technical skills throughout the sampling period (and
15 beyond). As such these comments contradict the dominant view within the DMSP that early
16 specialisation (as assessed by engagement in formal, organized competition) and adult
17 involvement during childhood lead to negative outcomes.

18 The elite coaches reported that competitive rugby games can have a positive impact
19 on development as long as the rules at each age level are developmentally appropriate and not
20 based on the adult version of rugby. Playing positions, scrums and lineouts were identified as
21 late specialization skills to be introduced during adolescence, while the introduction of
22 tackling at around the under-9 age level was seen as crucial to developing contact skills.
23 Alongside developing these playing skills, having fun was identified as an important factor.
24 Coaches believed that adults should play a crucial role in creating this developmental

1 environment by being supportive as coaches on the touchline, and providing positive
2 guidance for players when refereeing and coaching games. Overall, it was indicated that
3 children should play competitive rugby games from under-7 onwards (i.e. early
4 specialisation) and also participate in a variety of other sports as well. It was suggested that
5 this approach would have positive benefits for motivation, skill development and decision
6 making, that might benefit children whether they stayed involved in rugby or not.

7

8 **Acknowledgements**

9 This research was part of the 'Shaping the Game' project initiated by the RFU and
10 funded via an ESRC CASE Studentship for the first author. The authors would like to thank
11 the participants for their involvement in the study and the two blind reviewers for their
12 insightful comments that helped shape this manuscript.

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