



Shaping the Game

Introducing Children to Rugby Union: Retaining Players and Developing Talent

Interim Report: June 2011

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1. Executive Summary

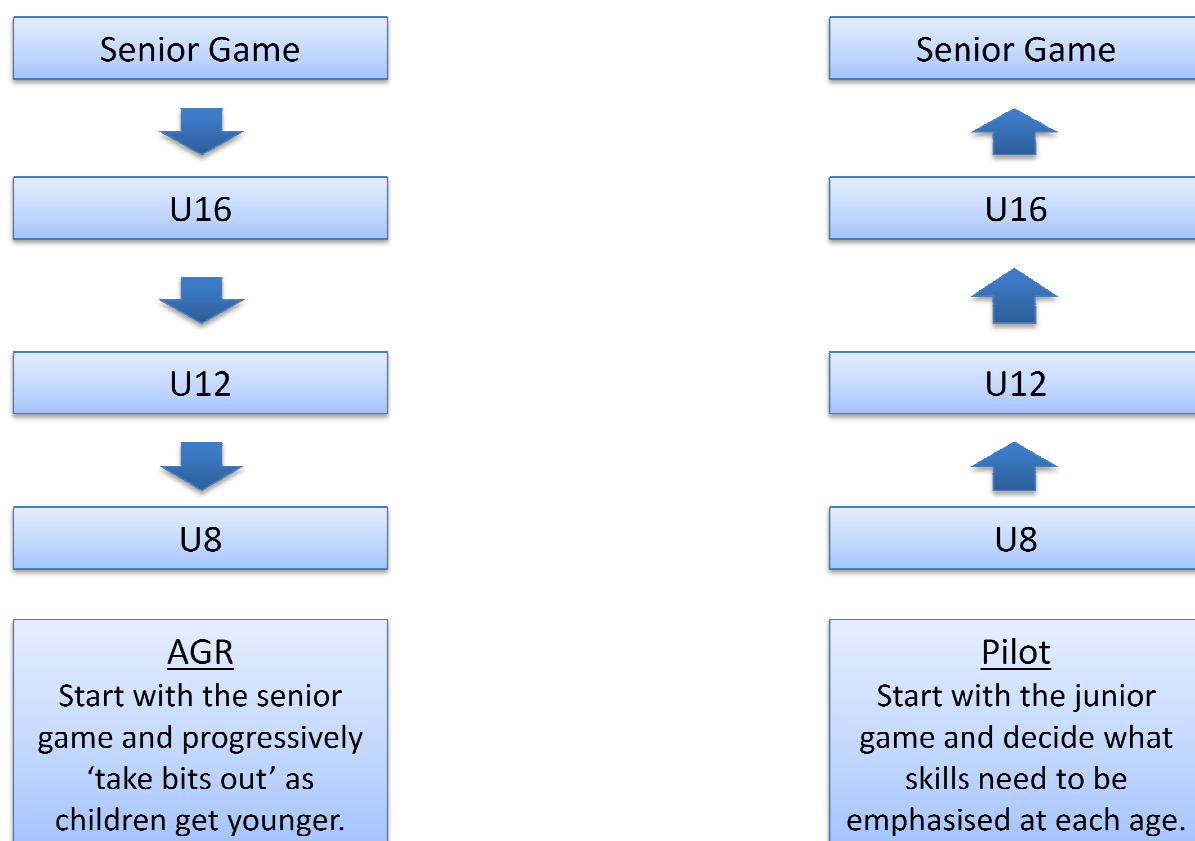
- A child-centred model is proposed for developing the game of rugby union for children based on the thorough understanding of:
 - The child: through biological, psychological and social development.
 - The game: focusing on 'on and off the ball' technical and tactical skills.
 - Coaching: highlighting the coaching process.
- Shaping the Game is a Rugby Football Union (RFU) pilot project agreed with and driven by three Constituent Bodies (CBs) and their clubs: Durham, Hampshire and Warwickshire. This research is part of a PhD funded by the ESRC and the RFU.
- During its first year (2010/11 season) the Shaping the Game pilot project has focused on the mini rugby game played at Under-7 and Under-9 level in England. The three participating CBs have played games under new pilot rules throughout the season. To evaluate and compare on-pitch performance of the pilot games with current Age Grade Regulations (AGR) games known for 20 years as the Continuum, data was collected in the pilot areas and also in three AGR other CBs - Cheshire, Devon and Gloucestershire- playing to the existing Continuum (AGR).
- Matches were filmed at festivals in both participating AGR (Continuum) and pilot areas during March, April and May 2011. At Under-7, there were 26 pilot matches and 15 AGR matches filmed; while at Under-9, there were 33 pilot matches and 21 AGR matches filmed. The total length of each game varied, but the number of behaviours occurring in each game were standardised to a nominal, 10 minutes duration for comparative purposes.
- Player feedback was collected at one festival from each age group and each version of the game. At the end of a match, players were asked to give a rating how much they enjoyed the game, and to suggest one thing they enjoyed the most and disliked the most about the match (see Appendix 1).
- At Under-7, the pilot game has 58% more tries ($p < .001$) and the AGR has 24% more tags ($p = .030$). There were no significant differences between the number of runs ($p = .868$) or passes ($p = .382$) in either game, however, these 'top-line' results need to be considered in terms of the number of players in each form of the game. For example, the forty passes per 10 minutes made in the AGR are spread between 14 players whereas the 37 passes in the pilot are spread between eight players.
- While the individual analyses for the Under-7 game are preliminary (and need to be considered with caution), it was found that 50% of the children in the AGR game could expect to receive less than 2 touches of the ball every ten minutes. Only 6% of players could expect this in the pilot game where 59% of the players received between 4 and 8 touches every ten minutes. This suggests that fewer numbers enable more children to get involved at this early age, where little passing prior to a tag occurs.

- There are many significant differences between the games at Under-9 level. There are 85% more tries ($p = .001$), 37% more runs ($p < .001$), 16% more tackles ($p = .015$), and more than twice as many (126% more) passes ($p < .001$) in the pilot compared to the AGR. The ball is also in play for 22% ($p < .0001$) longer in the pilot.
- In the pilot game the players are provided with more opportunities to combine their fundamental movement skills such as passing, running and turning in more complex forms as specialized skills Gallahue and Ozmun (2006). With more touches of the ball, individuals need to make more tactical decisions in attack. The results show that players are making significantly more passes in open play in the pilot with nearly 16 being made per 10 minutes compared to 9 in the AGR.
- More ball in play time at Under-9 in the pilot provides for excellent physiological benefits for children as well as allowing for more tactical and motor skill opportunities. During the pilot game the ball is in play nearly 85% of the time, which is 22% higher than compared to the AGR game. This increase of ball-in-play-time, along with the reduced number of players on each side in the pilot game should result in a game of higher intensity with positive fitness benefits for players (Hill-Haas, 2008, Rampinini et al., 2007).
- Although structured contact skills are not emphasised in the pilot, contact is still a significant part of the Under-9 game with over 16% more tackles completed when compared to the AGR. On closer examination there are more tackles to ground and 'held' in the pilot, although the difference is only significant for standing tackles. This could be linked to rewarding the contribution in defence of physically smaller players by allowing a 'grab' tackle in the pilot.
- There was no difference in the reported level of enjoyment in either the AGR or pilot Under-9 and Under-7 games. According to Bailey et al., (2010) fun and enjoyment are complex areas and a highly individual concept, which is a possible explanation to the variety of answers given by players about game enjoyment.
- Taken together, the results provide support for the pilot games.. The Under-7 age group game is characterised by lots of running, with little passing (in either version). However, the preliminary individual analysis does suggest that involvements are spread out more evenly when there are fewer players on the pitch (i.e. 7v7 in the AGR and 4v4 in the Pilot).
- The positive results at Under-9 provide exciting potential for the subsequent changes at Under-8 and especially, at Under-10 (year 2) and -11 (year 3)

2. Background

The Rugby Football Union (RFU) Shaping the Game pilot project is focuses on the competitive game played at mini rugby level from Under-7 through to Under-11 in England. The first year of the three-year pilot has focused on the rules played at Under-7 and Under-9. In the second year the emphasis will shift to Under-8 and Under-10 rugby and will conclude with the Under-11 game in the final year. Objective and subjective data will be gathered and analysed throughout this period and recommendations will be made for future developments.

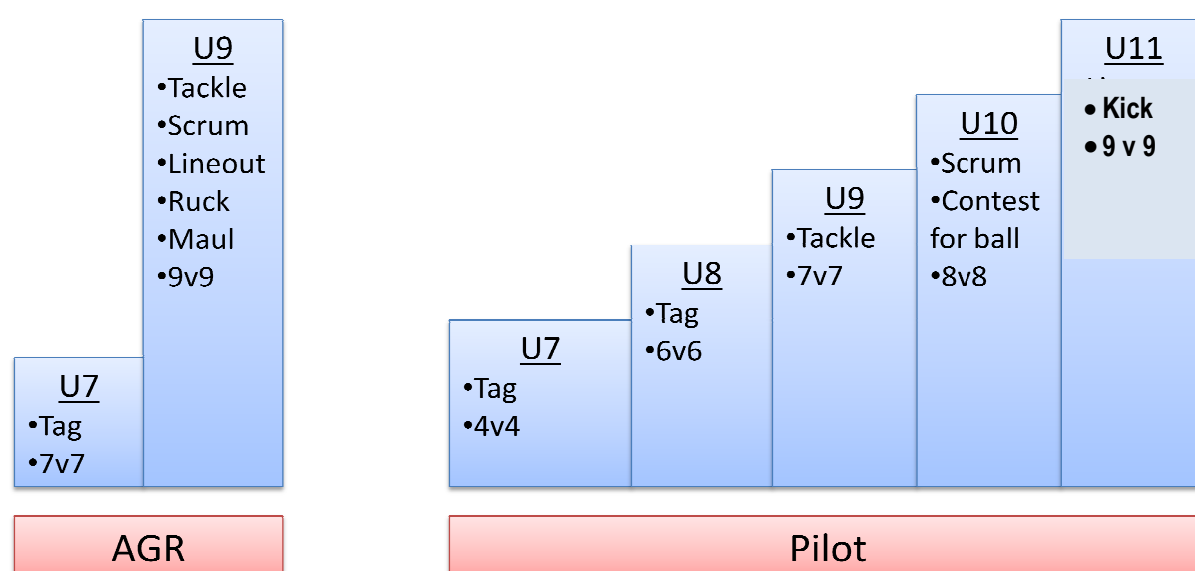
The rules developed for the pilot are based on the recommendations made by the University of Exeter from research commissioned by the RFU (Wilson et al., 2009b, Wilson et al., 2009a, Wilson et al., 2008b, Wilson et al., 2008a). The primary proposal emerging from the reports was that junior versions of the game played under the AGR did not explicitly consider child development issues and were overly based on 'pruned-down' versions of the senior game.



By using a bottom up approach the child is placed at the centre of the learning process and the competitive game is structured to create a learning environment that will allow players of all abilities to develop at their own pace. Player development is placed within a zone of proximal development (ZPD) which is 'the distance between the actual developmental level as determined by independent problem solving, and the level of potential development' (Vygotsky, 1978). Children should play a game that allows them to gain confidence by exploring what they already know and what they are capable of learning (Doherty and Hughes, 2009). Therefore, for children to be taught rugby union effectively at any stage of their development, the game needs to be developmentally appropriate

(Bruner, 1973). By ‘scaffolding’ the competitive game, children’s development is supported and skills and tactical elements introduced at an appropriate stage (Wood et al., 1976).

From Under-7 upwards the pilot rules emphasise key motor skills such as passing and tackling; and tactical elements such as decision-making and spatial awareness. Structured skills such as scrummaging and rucking are introduced at the appropriate developmental age (see previous detailed reports by Wilson et al.) In this way there is an emphasis on the key (developmentally appropriate) skills at the younger ages, with time provided to embed these skills (without the need to constantly introduce new technical skills). The figure below demonstrates the significant addition of skills that need to be coached and refereed between 7 and Under 9 in the current AGR. The question that arises from this is; “Is there really time to coach all these new skills?” It is evident that in the Pilot game similar levels of complexity will not occur until Under 11, with more time to embed key skills during the earlier years.



A graded (scaffolding) approach to introducing rugby specific skills

As Grehaigne et al., (2005) highlight, junior games should provide an outlet for children to achieve their own aspirations and not those craved by adults. At present this appears to be the dominant culture within children’s sport in England where adult coaching methods, such as blocked practices, are the accepted norm (Muir et al., 2011). Therefore, the aim of the pilot is to introduce competitive games, and influence coaching delivery, that reflect the different age and developmental levels of all players (Grehaigne et al., 2005).

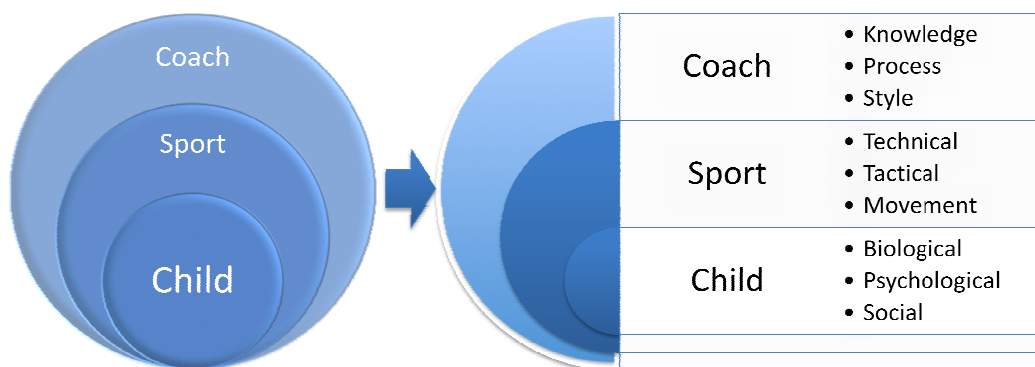
3. Developmentally Appropriate Rugby Union Games for Children

Player or child development cannot be adequately understood using a narrow, mono-disciplinary approach. An interdisciplinary approach is needed driven by an empirically/theoretically justified 'balance' between the bio-psycho-social domains (Bailey et al., 2010). In creating developmentally appropriate rugby union games for children there needs to be a thorough understanding of:

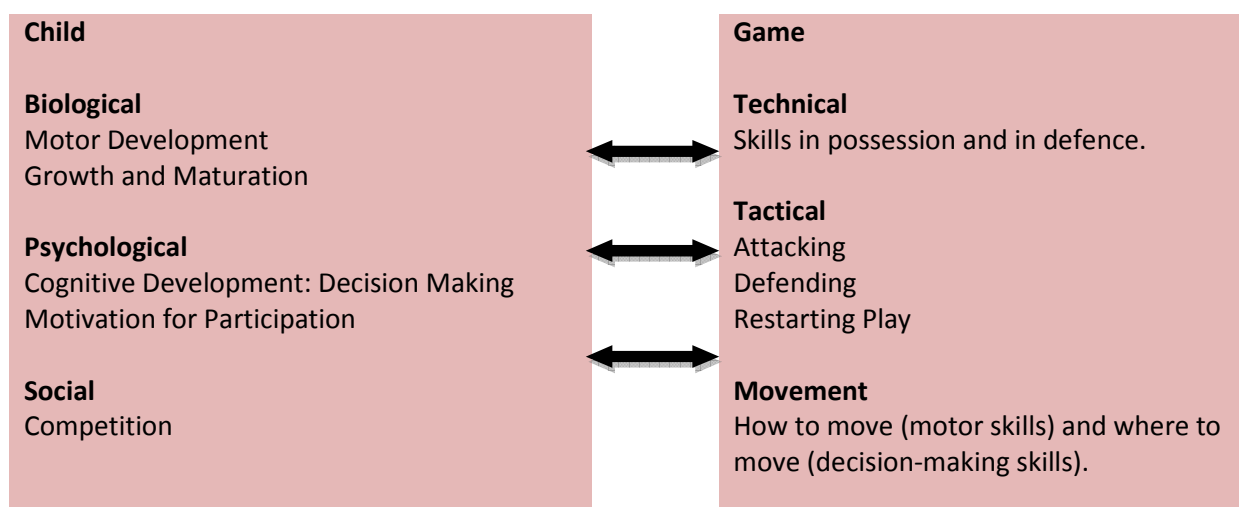
- **The child:** through biological, psychological and social development.
- **The game:** focusing on 'on and off the ball' skills and tactical skills.
- **Coaching:** highlighting the coaching process.

Adapted from Muir et al., (2011)

Indeed, a child-centred model for developing the game of rugby union for children is proposed as shown below.



While acknowledging the considerable impact of 'coaching' on development, the focus of the pilot study is on the competitive mini rugby games played between Under-7 and Under-11, and not the methods used by coaches in training sessions while preparing children for matches. Therefore, in the following section the focus is on the interaction between the child and the game they play, as outlined below.



3.1 Understanding the child

- **3.1.1 Biological**

Motor Development

At U7, children are approaching the end of the fundamental movement phase and the beginning of the specialized movement stage (Gallahue and Ozmun, 2006). Most children will have well developed stability skills such as turning, and dodging; and locomotion skills such as running and chasing. However, according to Gallahue and Ozmun (2006) manipulative movements such as catching may develop later due to sophisticated visual-motor requirements.

At U9 children are in the transitional stage of the specialized movement phase, where they seek challenging situations to test their fundamental skill capabilities (Gallahue and Ozmun, 2006). Fundamental movement patterns, such as dodging, passing and running, once mastered can be combined in more complex forms as specialized skills, such as in attack during a game. Typically, at Under-9 children are much more proficient in manipulative tasks, such as passing, and are beginning to demonstrate skills in sports and physical education settings (Doherty and Hughes, 2009).

Growth and Maturation

From the age of six years onwards within single-year age groups, children advanced in maturity are, on average, taller and heavier than peers who are average or late in maturity status. This can result in children with significantly different levels of biological maturity despite being of the same chronological age (Malina RM et al., 2005a, Malina RM et al., 2005b). Within a team in any mini age group a one-year age difference can exist between the oldest and youngest players. Between these individuals, this *relative age effect* is linked to significant differences in cognitive, physical, emotional and skilled performance (Helsen et al., 2005 , Malina RM et al., 2005a).

- **3.1.2 Psychological**

Cognitive Development: Decision Making

Based on Piagetian theory (Piaget, 1969) Under-7 players would be in the *pre-operational* cognitive stage (2- to 7-years). According to Piaget, thinking within this stage is egocentric – with children unable to think beyond their own perspective of a situation. This could explain why children at this age are looking to run with the ball and rarely want to pass. However, McMorris et al., (2006) state that at this stage a child *can* master simple decision-making 1 v 1 tasks; e.g. If I run straight at my opponent in a game I'm more likely to get tagged than if run to either side. With help from the coach, decision making skills can be developed in games involving more players, e.g. 2 v 2 (McMorris et al., 2006).

At Under-9, children are in the *concrete operations* phase (7- to 11-years) (Piaget, 1969). Here, players are beginning to make simple decisions based on what the present display affords (i.e. what's in front of them); e.g. to close down space and tackle a player in possession. McMorris et al., (2006) state that in the concrete operations stage, the child would be able to think through a series of events or actions and, as such, understand what happened and why.

Playing Positions

At Under-7 and Under-9 nearly all players will have to be conditioned to stay in position on the field as children do not have the cognitive capabilities or social experience to understand a specific role within a team (Coakley and Pike, 2009). According to Coakley and Pike (2009) this is extremely difficult for a child during a game as they must do three things at once to understand his/her position:

- Have the ability to mentally visualize the continuously changing positions of teammates and opponents covering the whole pitch.
- In relation to the ball be able to consider the spatial relationship between all players.
- Combine the above information to decide their position on the field.

In rugby union there's also the added complexity of the ever-changing location of the offside line especially in relation to set-pieces, rucks, mauls and open play for children to process during a game.

Motivation for Participation

Various studies highlight fun and enjoyment as key motivations why children taking part in sport (Coakley and Pike, 2009, UK, 2006, Siedentop, 2002a). However, within the participation motivation literature there is no comprehensive understanding of what comprises *fun* (Siedentop, 2002a), with Bailey et al., (2010) suggesting that it is a complex area and a highly individual concept.

According to Weiss and Williams (2003) children are looking for experiences that are challenging, fun and enjoyable, that lead to increased self-esteem and confidence. Game involvement has been linked to fun (Bengoechea et al., 2005) and experiencing fun and excitement through deliberate play is also seen as key for developing intrinsic motivation for sport (Côté et al., 2003).

• 3.1.3 Social

Competitive Games

For many children starting to play rugby at Under-7 or even at Under-9 it will be their first experience of playing competitive sport. Most of these individuals will not yet have the cognitive and social abilities they need to fully understand competitive relationships (Côté and Fraser-Thomas, 2007, Selman, 1971). According to Coakley and Pike (2009), being able to form and nurture competitive relationships is a requirement for understanding competition. Children who have experience of playing informal games use interpersonal and decision making skills and will learn such things as how to follow and enforce rules as well as co-operating with peers (Coakley and Pike, 2009). Therefore, by playing games based on deliberate play activities children should have the opportunity and experience of developing their interpersonal skills as well as movement, technical and tactical skills in an enjoyable environment (Côté et al., 2003, Baker et al., 2003).

As they progress towards Under-9 children should continue to learn to co-operate and express themselves on the field as well as learning about formal structures and rule-governed teamwork (Adler and Adler, 1998). Within an organized structure children also learn to manage relationships with adult authority figures, such as the coach (Coakley and Pike, 2009). However, to fully enjoy the playing experience the touchline behaviour of coaches and parents needs to be a positive influence

on performance. For many individuals, having constant shouts of ‘spread out’ and ‘run straight’ has a detrimental effect on their game experience (Coakley and Pike, 2009).

3.2 Game Understanding

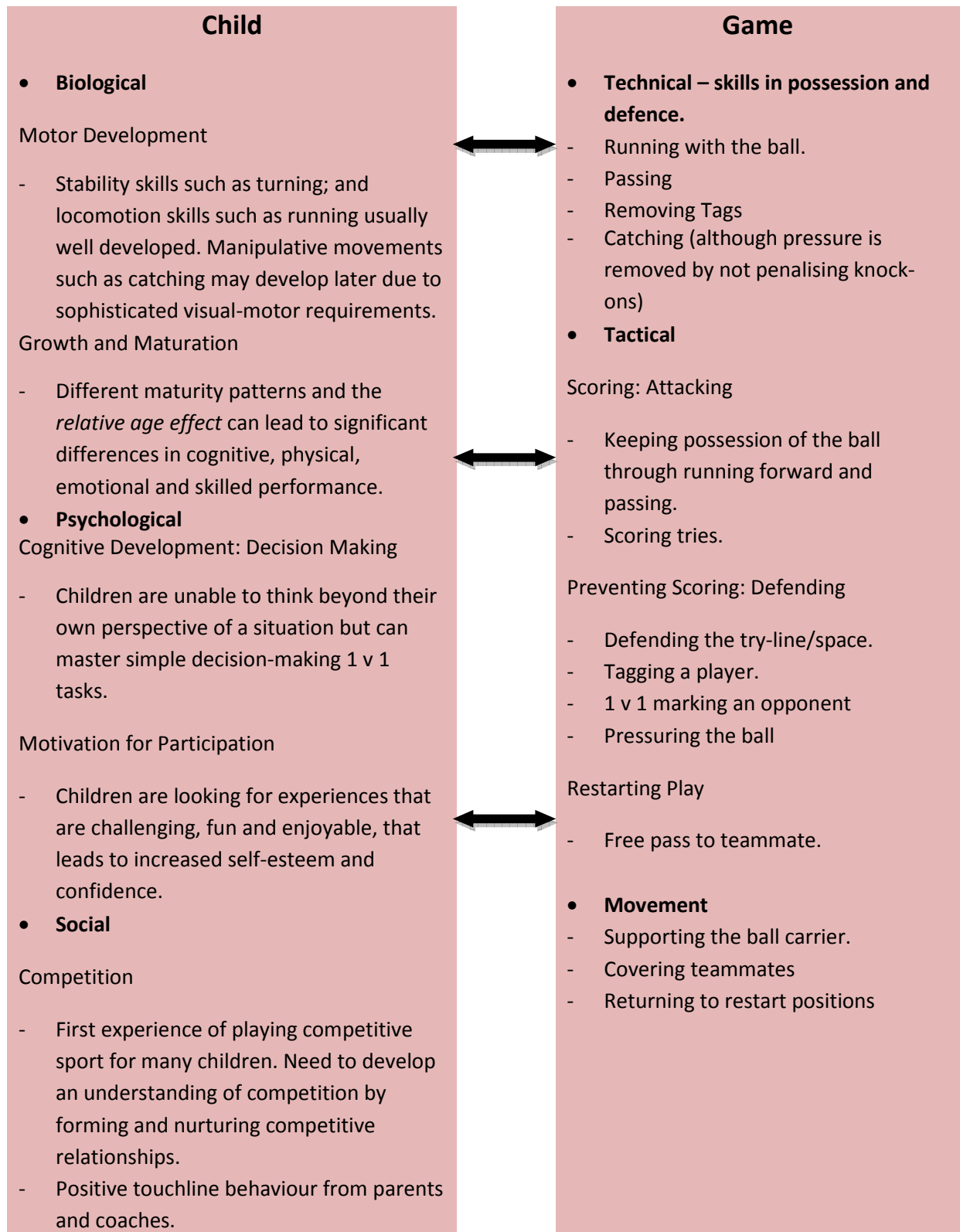
The second component of the model requires an examination of which skills are most important for the game and how these can best be introduced, reinforced and fine-tuned at each age level. As discussed earlier, the current mini rugby game appears to be based on a modified version of the adult game and founded on the application of the principles of an early specialisation sport, not a late specialisation sport (Wilson et al., 2008b). The pilot game focuses on fundamental motor skills and the development of decision-making skills in early age groups while specific skills such as line-out are introduced at older age groups. This graded approach (scaffolding) to the introduction of skills is more appropriate for learning, as skills that are considered important have more time to be embedded before new skills are added to the mix.

Mitchell et al.,(2006) suggest developing a framework to assist in the process of creating games with different levels of tactical complexity. When creating a game it’s essential to identify key tactical problems and associated skills and ensure that it matches the level of players’ development (Mitchell et al., 2006). As a player’s game understanding and skills develop they move to the next age group where the complexity of the game increases. For example, at Under-7 one solution to the tactical problem of scoring is to keep possession of the ball and effectively attack the try-line. The player in possession needs decision-making skills such as the tactical ability to identify space and the fundamental motor skills to run and evade opponents. Players in support need to be able to run and change direction and place themselves in the best position to support the ball carrier. When looking at game performance it’s essential that we don’t narrow our focus to the execution of motor skills only. What to do in game situations with or without the ball is equally as important as how a skill is performed (Mitchell et al., 2006, Williams and Ward, 2007).

	Under-7	Under - 9
Skills in possession and defence.	<ul style="list-style-type: none"> - Running with the ball. - Passing - Removing Tags 	<ul style="list-style-type: none"> - Running with the ball. - Passing. - Tackling.
Off the ball movement	<ul style="list-style-type: none"> - Supporting the ball carrier. - Covering teammates - Returning to restart positions 	<ul style="list-style-type: none"> - Supporting the ball carrier. - Adapting field position as play develops. - Covering teammates - Returning to restart positions.
Tactical – Problems.		
Scoring: Attacking	Keeping possession of the ball through running forward and passing. Scoring tries.	Keeping possession of the ball through running forward. Scoring tries. Drawing a defender to pass.
Preventing Scoring: Defending	Defending the try-line/space. <ul style="list-style-type: none"> - Tagging a player. - 1 v 1 marking an opponent - Pressuring the ball 	Defending the try-line/space. <ul style="list-style-type: none"> - Tackling a player. - 2 v 2 marking an opponent. - Pressuring the ball as a team.
Restarting Play	Free pass to teammate.	Free pass to teammate.

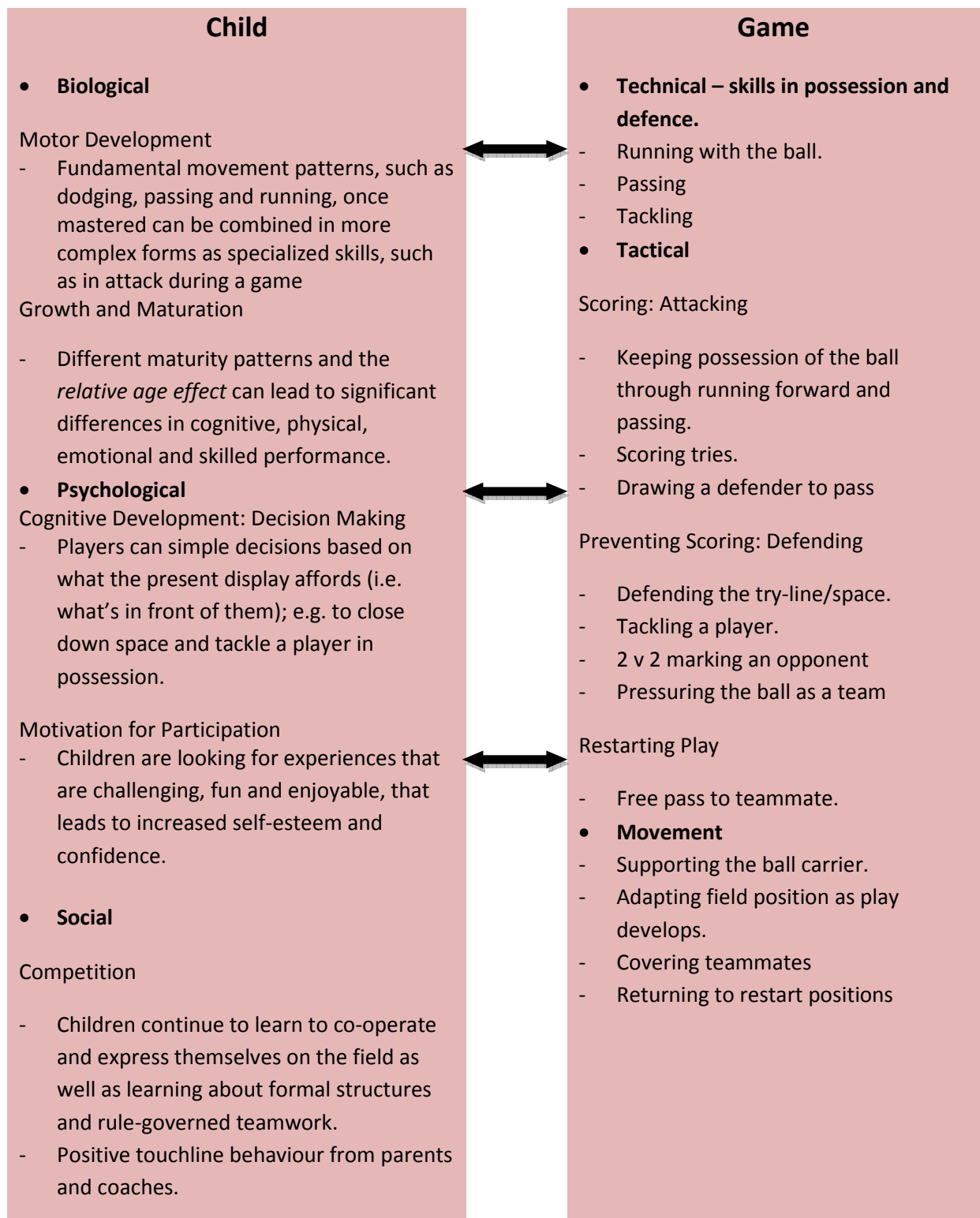
Developmentally Appropriate Rugby Union Games for Children

Under-7 Summary



Developmentally Appropriate Rugby Union Games for Children

U9 Summary



4 Shaping the Game

Shaping the Game is a Rugby Football Union (RFU) pilot project agreed with and driven by three Constituent Bodies (CBs) and their clubs;; Durham, Hampshire and Warwickshire.

The long term objective of the pilot is to:

- Provide a progressive player pathway that will enhance the way in which players are developed in a more incremental manner.
- Provide a game which is in line with the principles of Child Development based on extensive research and expertise.
- Increase involvement of all players.
- Emphasise competitive performance not competitive outcome.
- Encourage less structure (encourage skills and discourage fear of failure).
- Make the game easier to understand and referee.
- Less emphasis on contact and more on continuity in early years.
- Rewarding intention to tackle in early years as much as ability to tackle.

RFU (2010)

4.1 The First Year

During its first year (2010/11 season) the Shaping the Game pilot project has focused on the mini rugby game played at Under-7 and Under-9 level in England. An age-group Under-7 and Under-9 player was one whose age at midnight on 31st August was less than 7 and 9 years, respectively. The three participating counties of Durham, Hampshire, and Warwickshire have played games under new pilot rules throughout the season. To evaluate and compare on-pitch performance of the pilot games with current AGR games played data was collected in the pilot areas and also in three AGR areas of Cheshire, Devon and Gloucestershire.

Under 7 – Key Rule Changes

	AGR Current	Pilot
Pitch Size	60m x 30m	20m x 12m
Number of players	7 v 7	4 v 4
“Knock-On” by a player	Offence – opposition ball.	No offence – play on.

- Smaller pitch size and less number of players on each team in the pilot.
- No offence for a “knock-on” in the pilot.

Rationale: Less players should mean that more children will get touches and opportunities to score tries and make tags (especially as at this age, children are unlikely to consider passing as a first option). At Under-7 children are in the process of developing manipulative movements such as catching and as they are in the *pre-operational* cognitive stage (Piaget) it makes sense to reduce the cognitive burden by not punishing catching mistakes.

Under 9 – Key Rule Changes

	AGR Current	Pilot
Number of players	9 v 9	7 v 7
Scrum and Lines-out	Yes	None
Rucks and Mauls	Yes	None
Tackling	Yes	Yes 1 defender only. Grasp allowed.

- Less number of players on each team in the pilot.
- There are no scrums, lines-out, rucks or mauls in the pilot.
- Tackling remains a key *element in both games*, with a slight modification in the pilot rules to encourage physically smaller players to assist defensively.
- Rationale: Fewer players to simplify game and provide more opportunities for decision-making. By emphasising passing and evasion in the competitive game, these skills should be reinforced in the time which would have been spent learning new skills of rucking, mauling, scrums and lines-out – See the visual representation of this graded approach on Page 6.

4.2 Year One: Aims

The aims of the research for the 2010/11 season were:

- At Under-7 and Under-9, to evaluate and compare on-pitch behaviours between the AGR and pilot games.
- Examine the attitudes of key ‘users’ at Under-7 and Under-9 to the AGR game and pilot game.

5 Methods

Matches were filmed at festivals in both participating AGR and pilot areas during March, April and May 2011. At Under-7, there were 26 pilot matches and 15 AGR matches filmed; while at Under-9, there were 33 pilot matches and 21 AGR matches filmed. The total length of each game varied from 10 minutes to 20 minutes duration (in some AGR games). For subsequent comparative analyses, the number of behaviours occurring in each game were standardised to a nominal, 10 minutes duration (e.g. if there were 40 passes in a 20 minute game, this would be standardised to 20 passes per 10 minutes).

As with previous research involving rugby games at this age and with small-sided matches in football, the focus was on following the ball carrier rather than individual players (ARU, 2010, Rampinini et al., 2007, Fenoglio, 2005). A notational analysis system was developed based on a clear identification of critical behaviours for comparing the AGR and pilot game (Hughes and Franks, 2004). Categories for analysis were identified following discussions with coaches at the RFU about the key elements of Under-7 and Under-9 matches. These measures also included (but were not limited to) those used by the recent research into child behaviours during mini-rugby carried out by the (ARU, 2010).

The behaviours for comparison in the Under-7 games were: the number of tries, runs, passes (restart, before tag and after tag), and tags made. At Under-9, the number of tries, runs and tackles (to the ground and standing) were measured; while the amount of passes were examined in more detail (restart, breakdown, set piece, open play, passes when tackled to the ground and passes in a standing tackle). The number of lines-out, scrums, rucks and mauls were recorded for the AGR games only as there were none in the pilot game. The amount of time the ball was in play was compared between the pilot and AGR games.

Player feedback was collected at an Under-7 AGR festival in Devon during April, 2011 and in March, 2011 at a pilot Under-7 festival in Hampshire. The feedback from players at both Under-9 festivals was collected in March 2011 at an AGR festival in Gloucestershire and a pilot festival in Hampshire. At the end of matches at both Under-7 and Under-9 players were asked to give a rating how much they enjoyed the game, and to suggest one thing they enjoyed the most and disliked the most about the match (see Appendix 1). We also collected data from parents at these festivals but the analysis of these data is still incomplete (see Appendix 2).

Finally, a more detailed questionnaire for coaches was developed to assess their views on the game of rugby they coach (whether Under-7 or Under-9, or AGR or pilot). There were some unavoidable delays in uploading this to the RFU's survey monkey website, but this is 'live' since from the first week in June 2011. It is expected that this data will be analysed over the summer (2011) to get an indication of where coaches feel the emphasis for rugby should be placed and whether the game they coached this season was best suited to these aims.

6 Results

6.1 Under 7 Game Behaviours

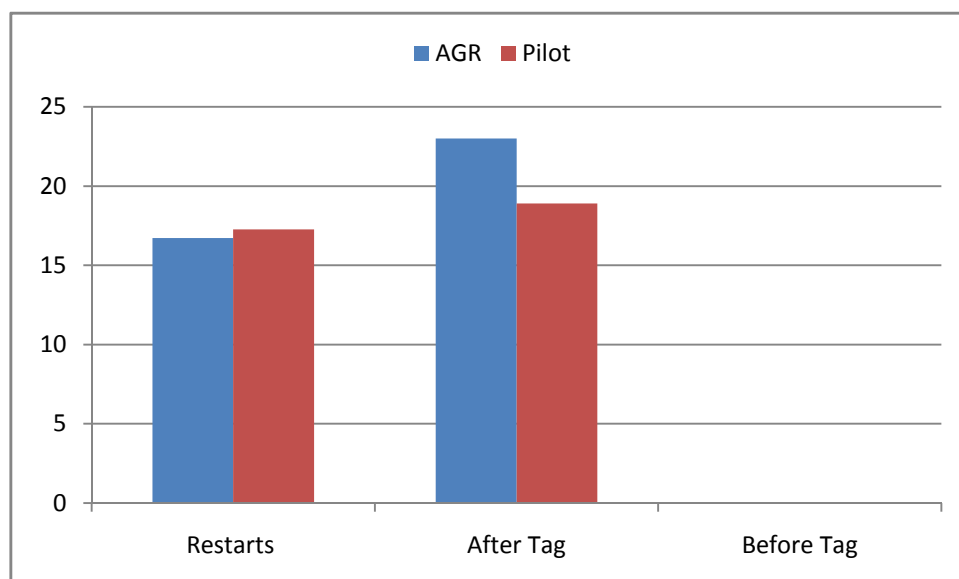
Basic Skills



On first sight, the basic results show few differences between both games. However the analysis must take into account that the number of incidents in the pilot are shared between 8 players (4 v 4) compared to the AGR where there are 14 players (7 v 7). This needs to be considered when interpreting these top line results, and for passing.

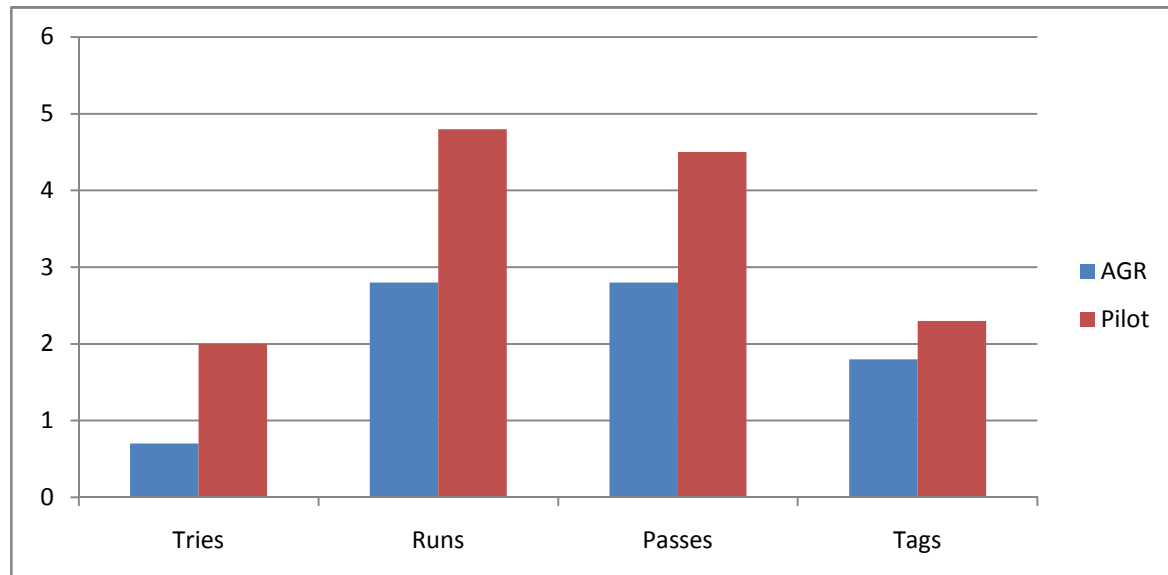
The pilot game has 58% more tries ($t_{39} = 4.51, p < .001$) and the AGR has 24% more tags ($t_{39} = 2.264, p = .030$). There were no significant differences between the number of runs ($p = .868$) or passes ($p = .382$) between either game.

Passing



There were no significant differences in the types of pass made in either game (all p 's > .111). In all the games viewed, there were *NO* passes made prior to a tag. However when the average number of passes per player is analysed there is a marked difference between 4 v 4 and 7 v 7.

Average number of involvements per player*



**NB Given that the sample is limited, only tentative conclusions can be drawn and these will need further corroboration from a larger sample of data*

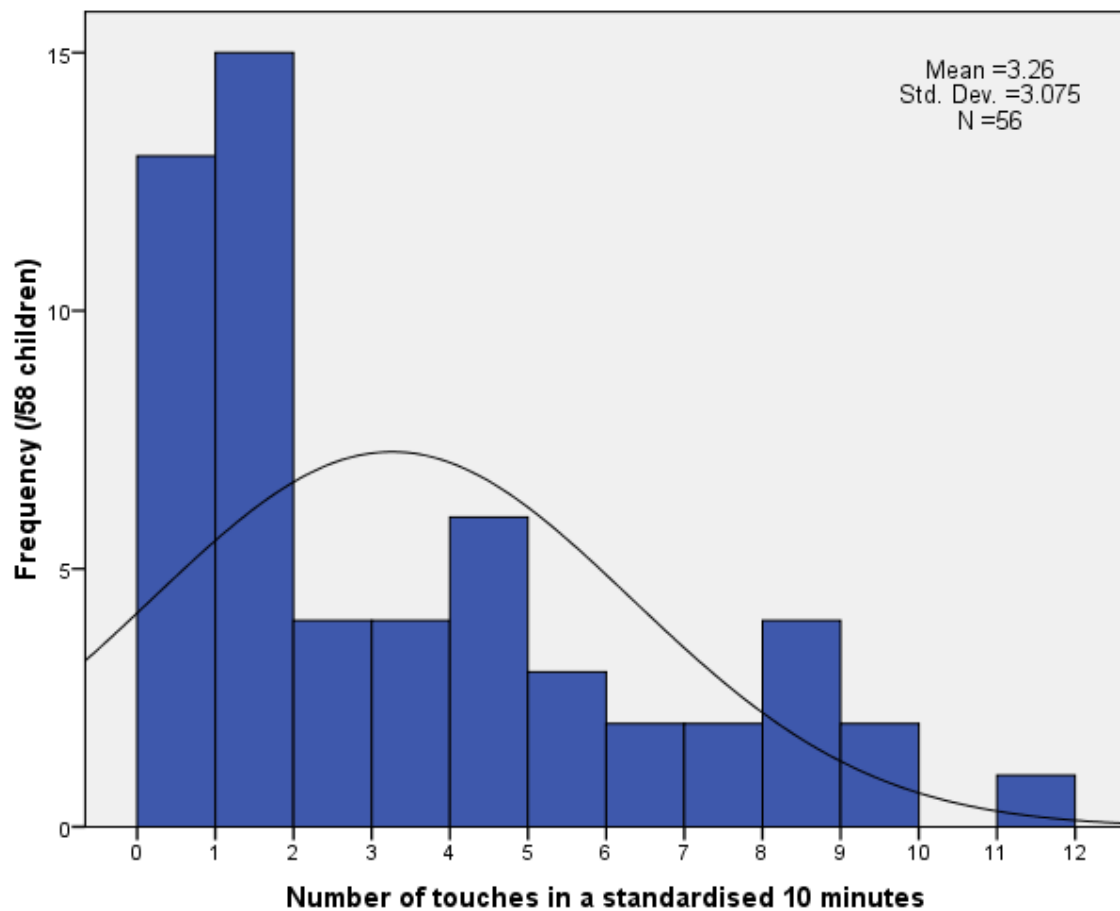
Preliminary Under-7 Individual Analysis

It was not possible to carry out a detailed analysis of how many touches every player in every game had due to; (a) the difficulty in distinguishing children when not wearing numbered bibs and (b) the delay in receiving game analysis software. It was only possible to locate 2 games under each rule structure (divided into 4 separate halves) where both teams agreed to wear numbered bibs. These data are presented below for the number of touches of the ball each child got (again converted to a standardised 10 minutes of play). Given that the sample is limited, only tentative conclusions can be drawn and these will need further corroboration from a larger sample of data.

AGR

Four halves of rugby with 14 children on the pitch equates to 56 data points to analyse. There was a mean of approximately 3 touches per ten minutes in this period, however, the data is significantly skewed by a modal score of zero touches (occurring 13 times; 23% of the players). Importantly, another 15 players only got between 1 and 2 touches, meaning that 50% of players can expect to receive two or less touches in 10 minutes in the AGR game.

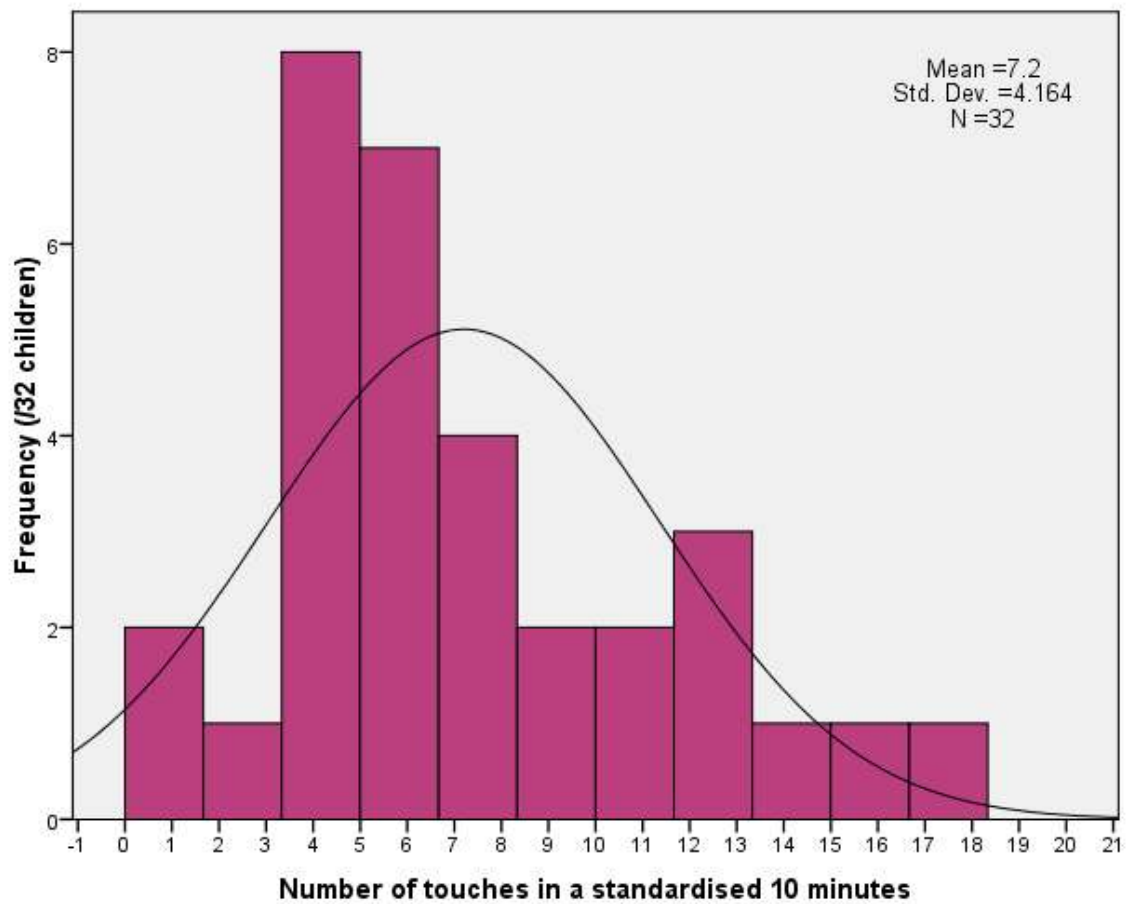
Number of touches of the ball in AGR matches



Pilot

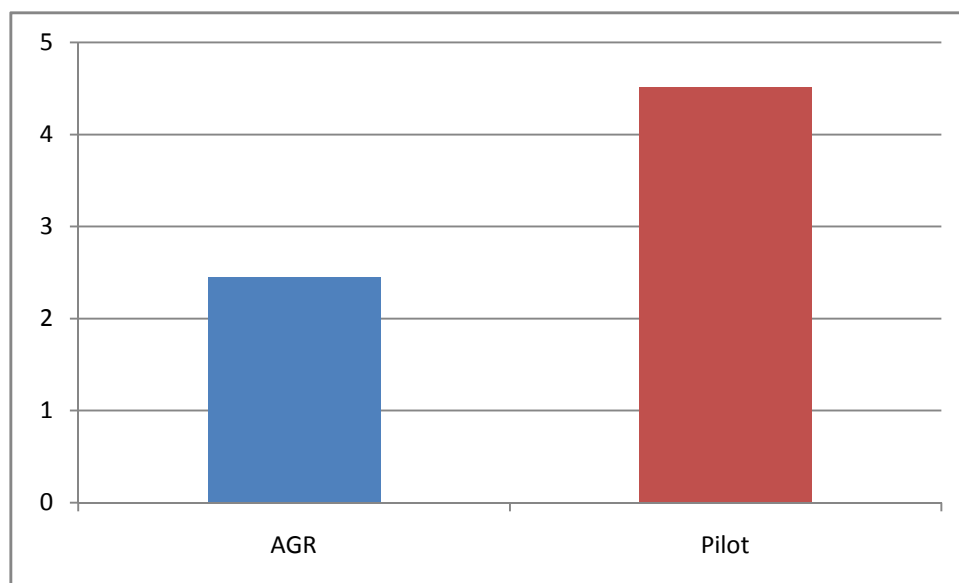
Four halves of rugby with four children on each time provides 32 data points for analysis. While the mean number of touches (of the ball) was higher than for the AGR (~7 as opposed to ~3), it is the distribution of touches that is most startling. The data is more normally distributed and the mode value is 4 touches per game. Also there is only one child who got no touches (and one more who got only one – a total of 6% of the data). In the pilot game 59% of the players got between 4 and 8 touches in each game.

Number of touches of the ball in Pilot matches



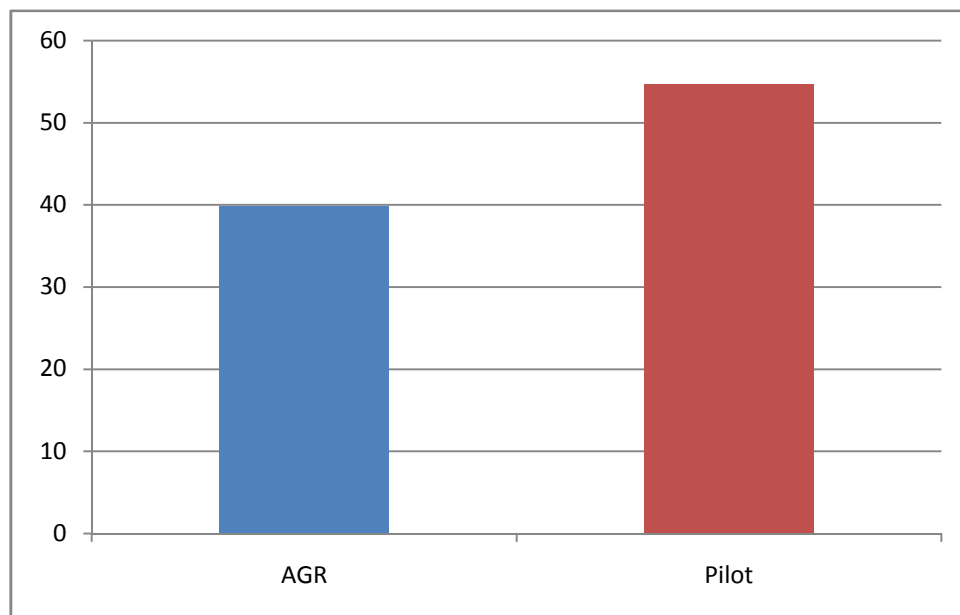
6.2 Under 9 Game Behaviours

Number of Tries scored / 10 minutes



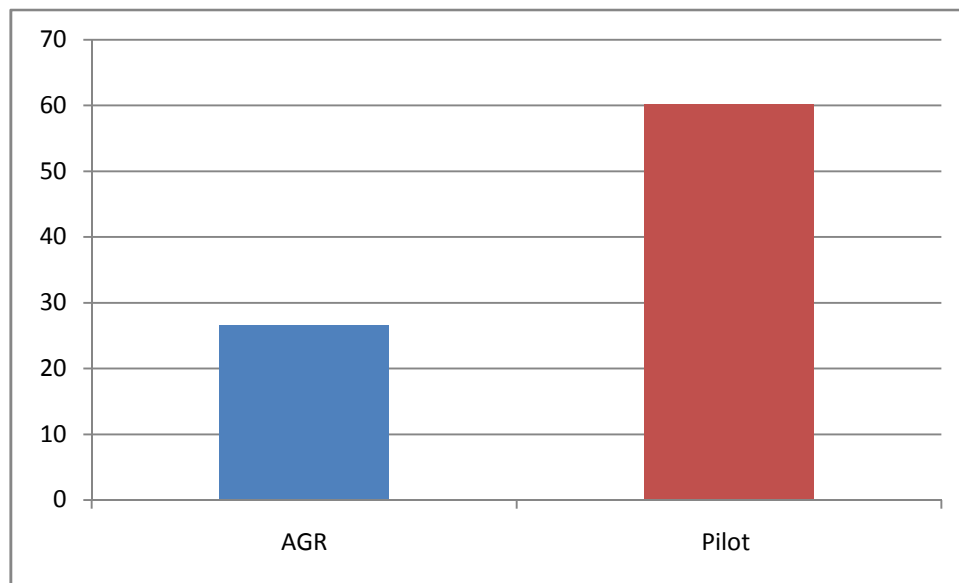
There were 85% more tries ($t_{52} = 3.66, p = .001$) in the pilot compared to the AGR.

Number of Runs / 10 minutes

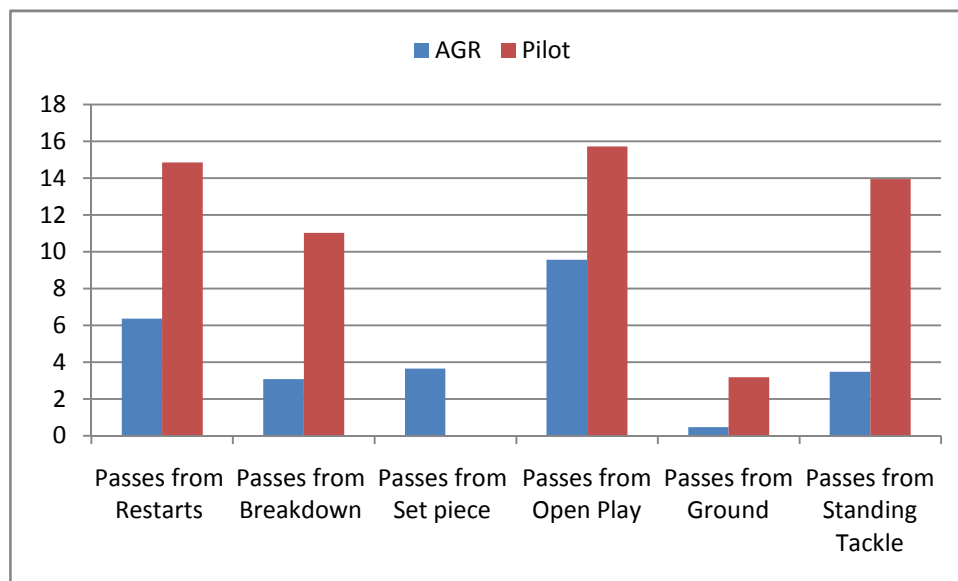


There were 37% more runs ($t_{52} = 5.44, p < .001$) in the pilot compared to the AGR.

Number of Passes / 10 minutes

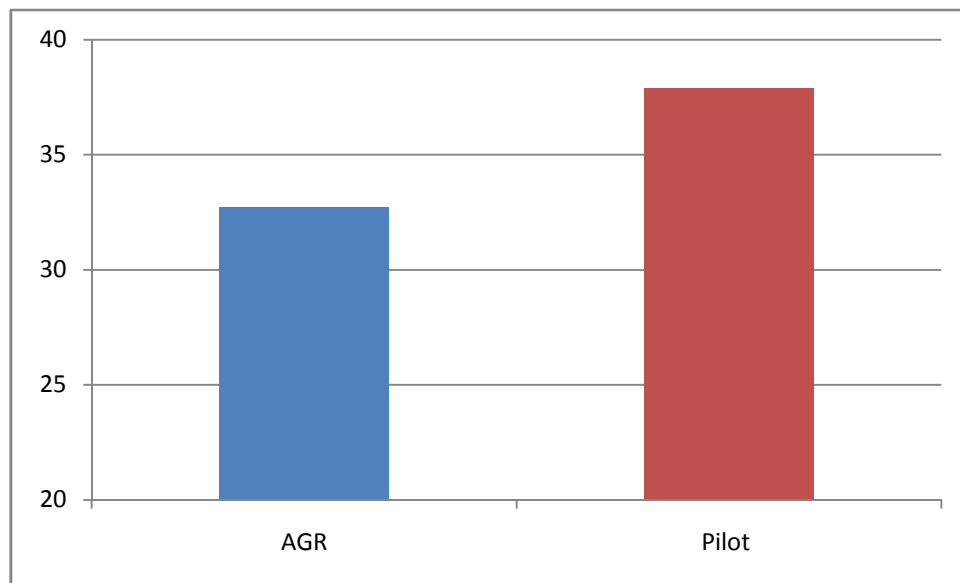


There were more than twice as many (126% more) total passes ($t_{52} = 8.35, p < .001$) in the pilot compared to the AGR.

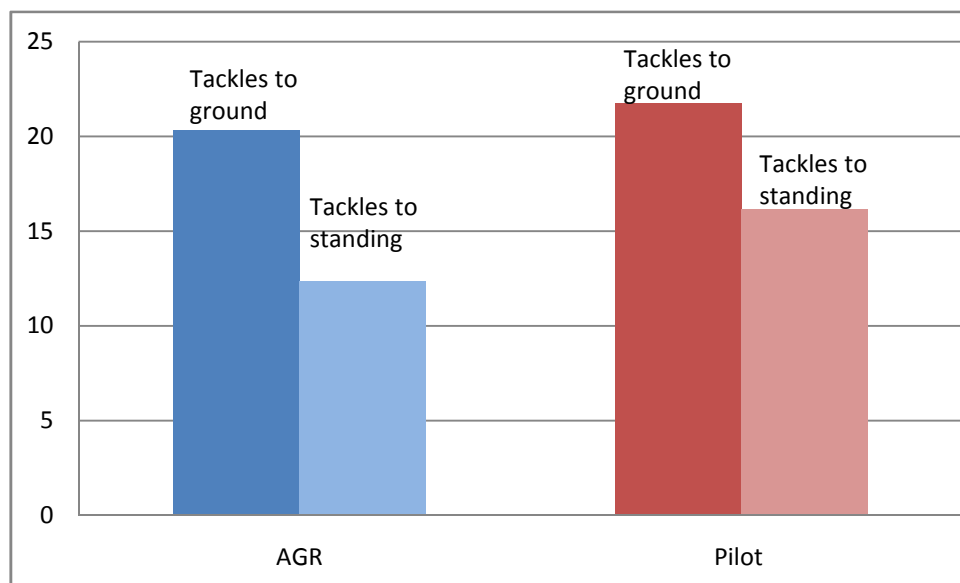


When we examine passes in more detail we see that the pilot has significantly more passes from differing starting positions (t 's vary from 3.52 to 14.59; all p 's $< .01$) with the exception of set pieces (there are none in the pilot). However passes from open play are significantly higher in the pilot

Number of Tackles / 10 minutes

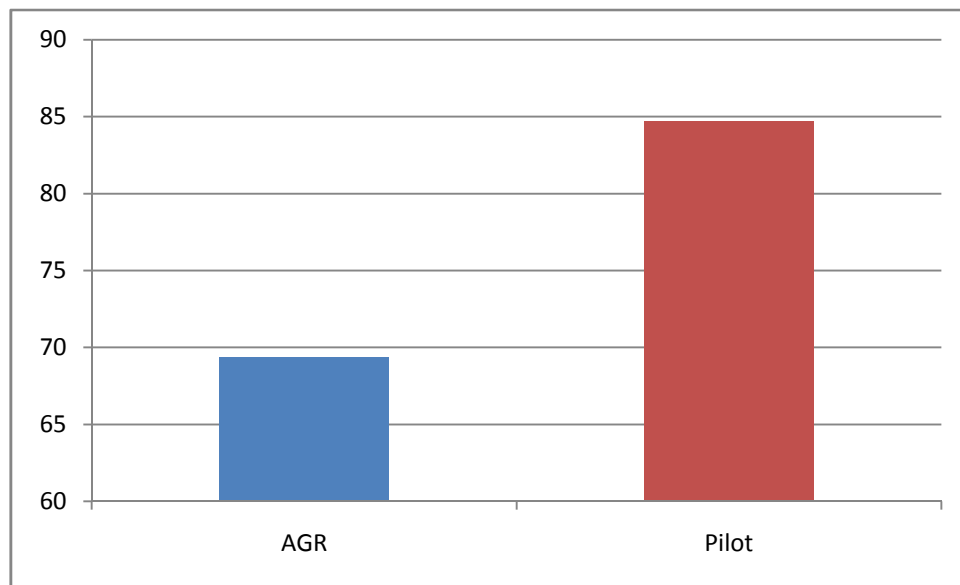


There were 16% more tackles ($t_{52} = 2.52, p = .015$) in the pilot compared to the AGR.



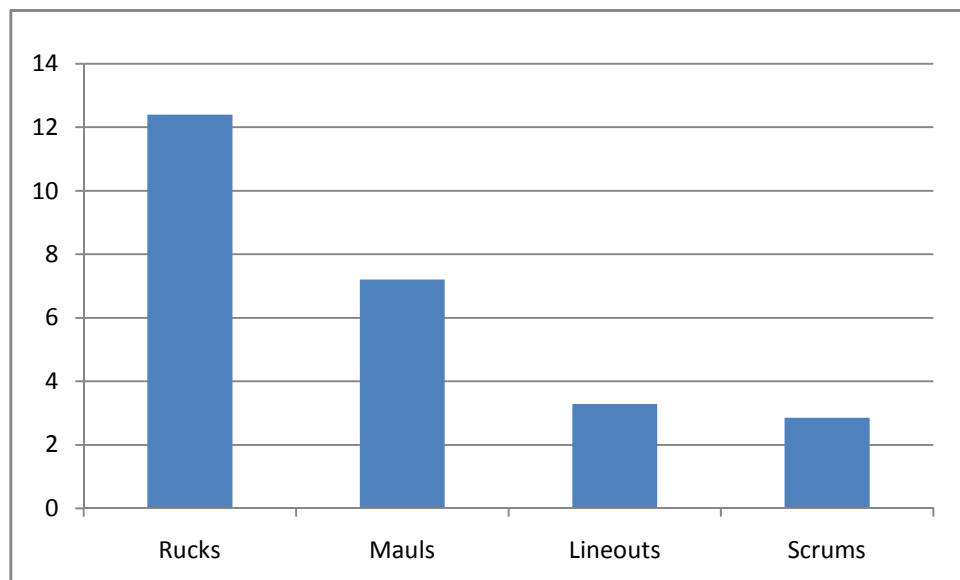
When we examine tackles in more detail we see that there are more tackles to ground and 'held' tackles in the pilot game than the AGR, although this difference is only significant for standing tackles ($t_{52} = 2.16, p = .035$).

Percentage Time Ball in Play / 10 minutes



There was 22% more ball in play ($t_{52} = 8.81, p < .0001$) in the pilot compared to the AGR. (Note that this does not count time in which the ball is in a ruck or maul – which might take a further 2-3 minutes of time – see below).

Number of AGR specific 'Skills / Activities' / 10 minutes



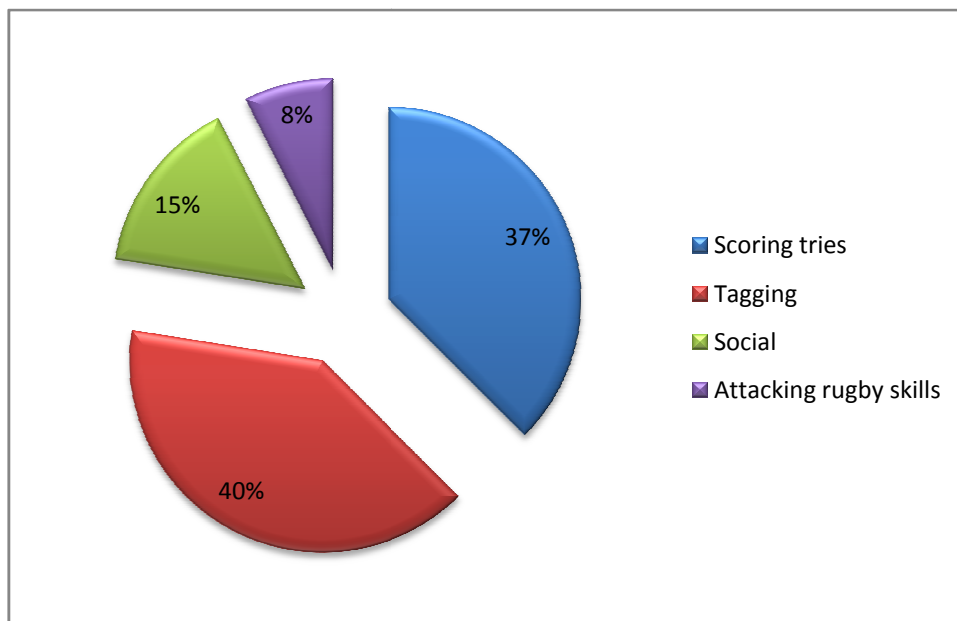
On average there are 12 rucks and 7 mauls every ten minutes in the AGR games.

6.3 U7 Participant questionnaire data

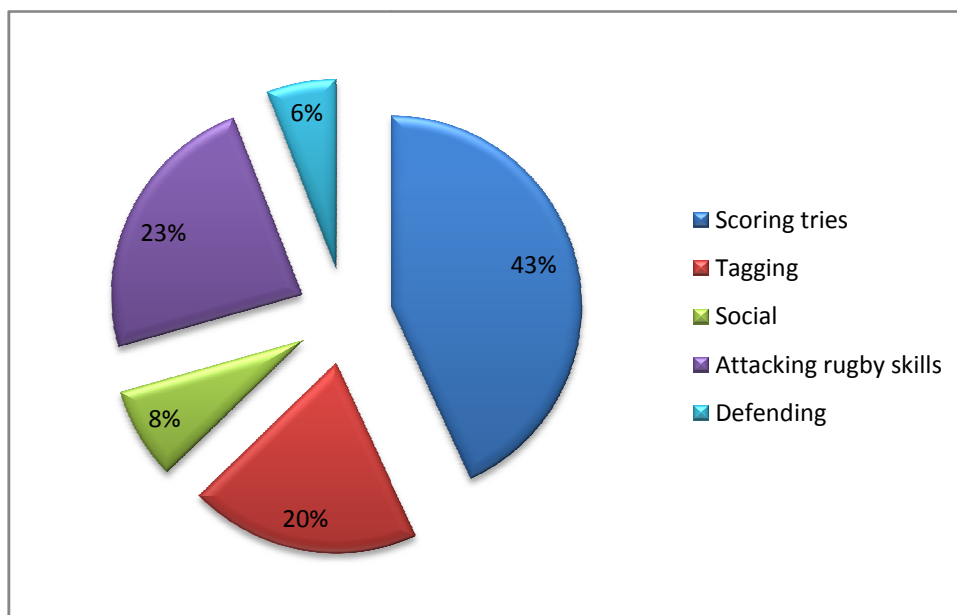
40 children from AGR games and 51 from Pilot games responded to the following questions after a game (see below).

1. What did you like MOST about playing in that last game?

AGR:



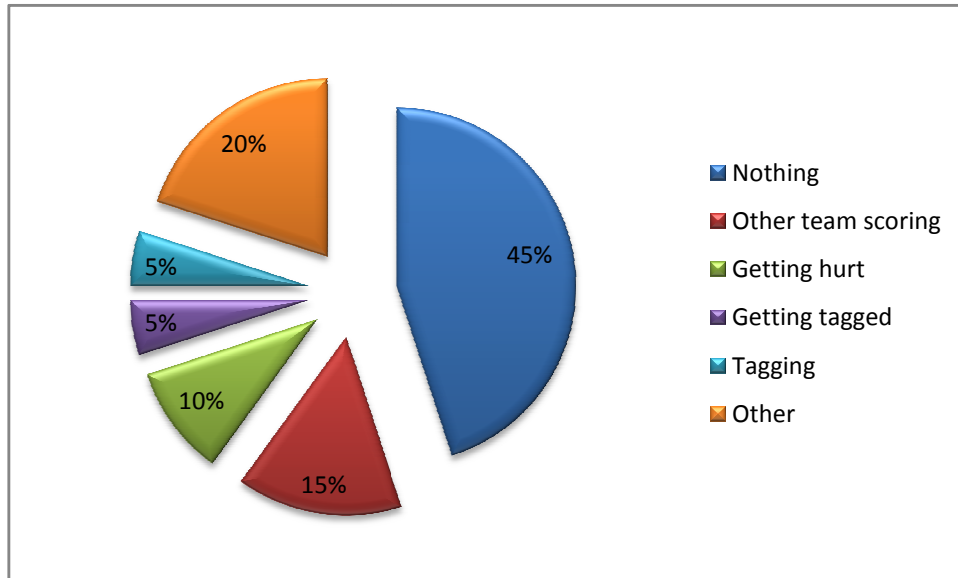
Pilot:



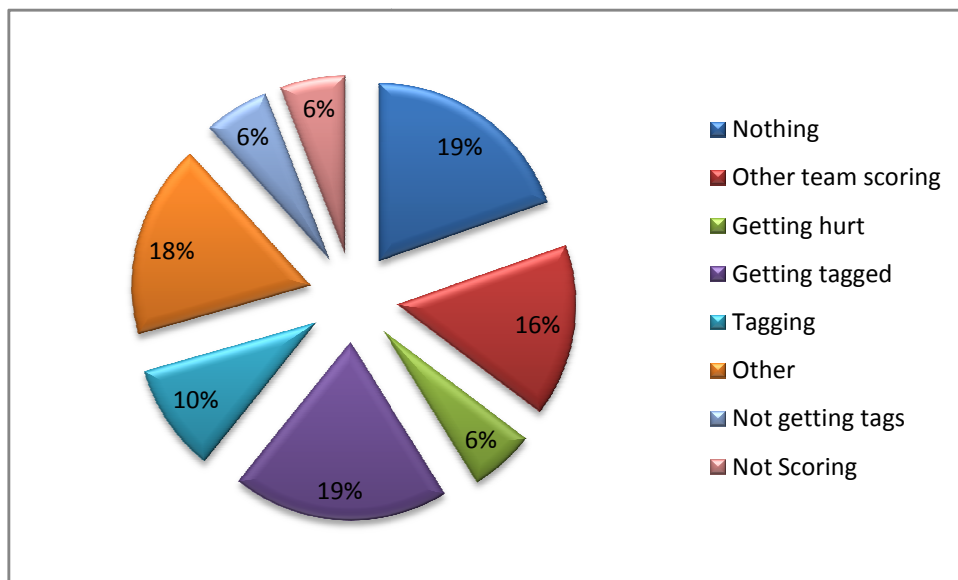
Scoring tries (37% AGR; 43% Pilot) comes out as the most fun aspect of rugby in general, closely followed by tagging (40% AGR; 19% Pilot).

2. What do you like LEAST about playing in that last game?

AGR:

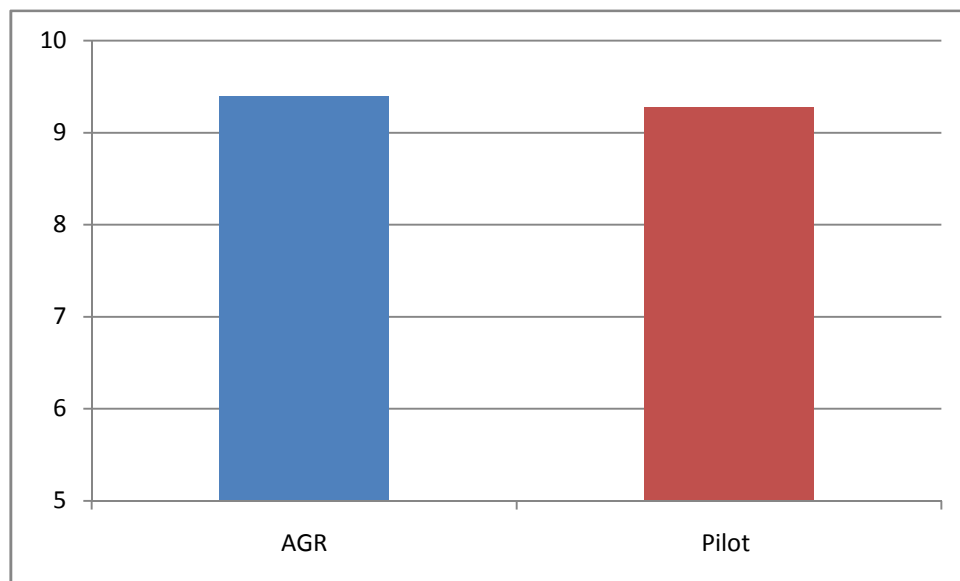


Pilot:



“Nothing” was the most common response to this question! (45% AGR; 19% Pilot). “Other team scoring” also ranked high (15% AGR; 16% Pilot).

3. “How much did you enjoy that game?” (Scale from 0 – 10)



There was no difference in the level of enjoyment reported by children playing each game, ($t_{90} = 0.41, p = .685$).

Limitations (U7) It would have been desirable to have collected more data from children to be more confident in the implications, however, this was a time demanding procedure which had to take place while the next game was being filmed and therefore required multiple helpers.

There are always difficulties in getting young children to report feelings especially when they have to be collected in groups after a game. First, their responses will be biased by their particular experiences in the preceding game; which may not be typical. Second, it was sometimes found if the first child questioned provided a particular answer, subsequent children from the same team would simply copy this response.

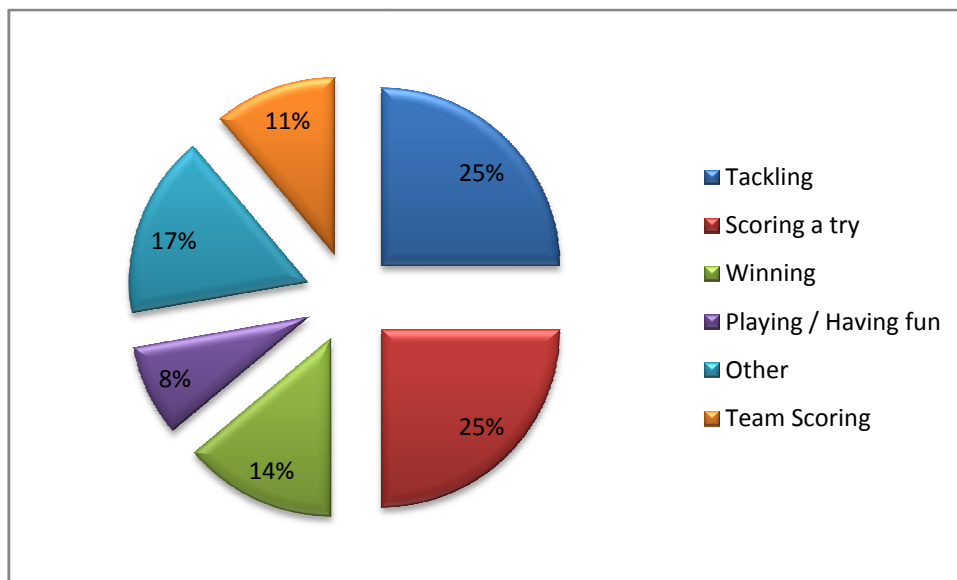
There was also a problem in making it clear that children could use the whole of the 0-10 scale. Most children simply circled the '10'. Whilst it is hoped that this is because they thought that the game was 'the most fun ever' (which was the label), it may have just been that they did not fully understand the task.

6.4 U9 Participant questionnaire data

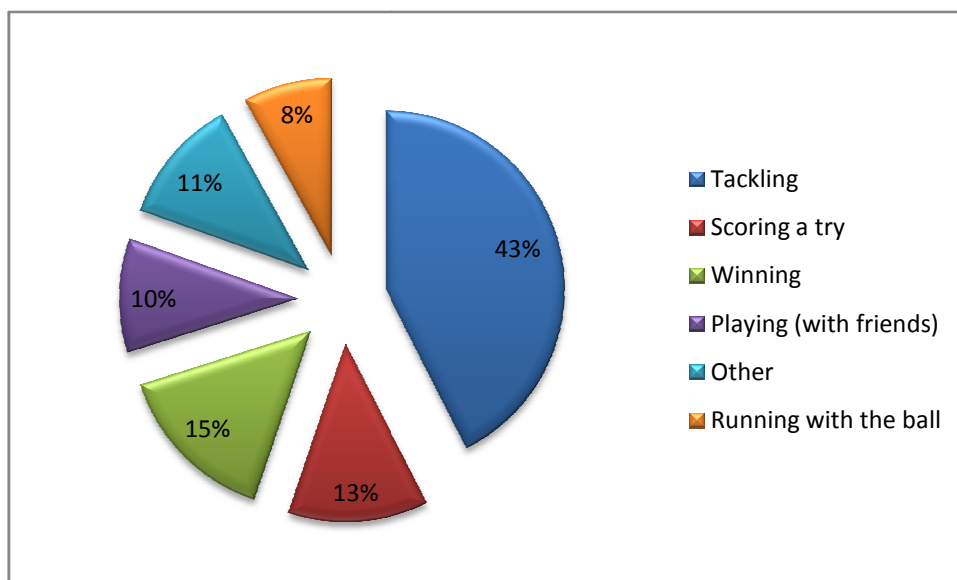
39 children from AGR games and 87 from Pilot games responded to the following questions after a game (see below).

1. What do you like MOST about playing rugby?

AGR:



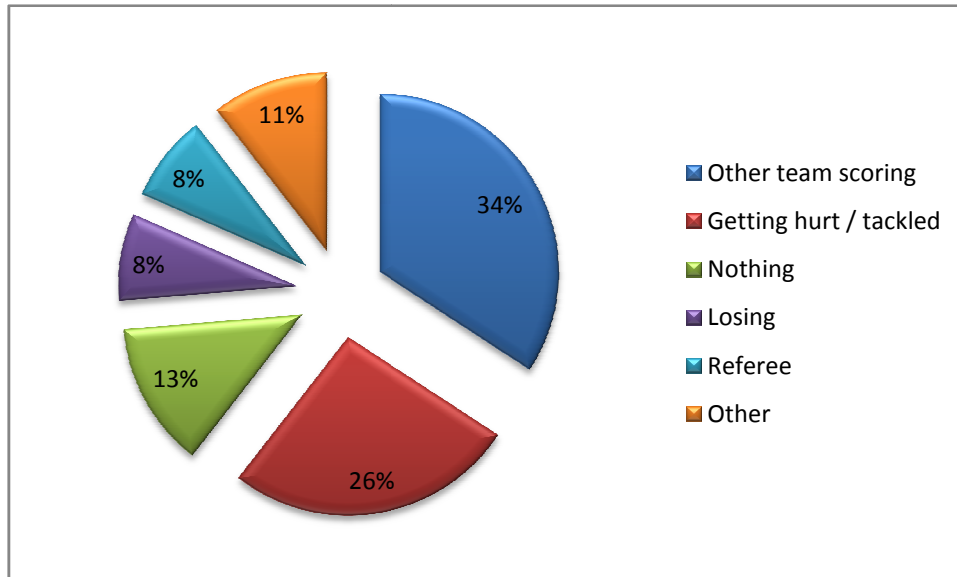
Pilot:



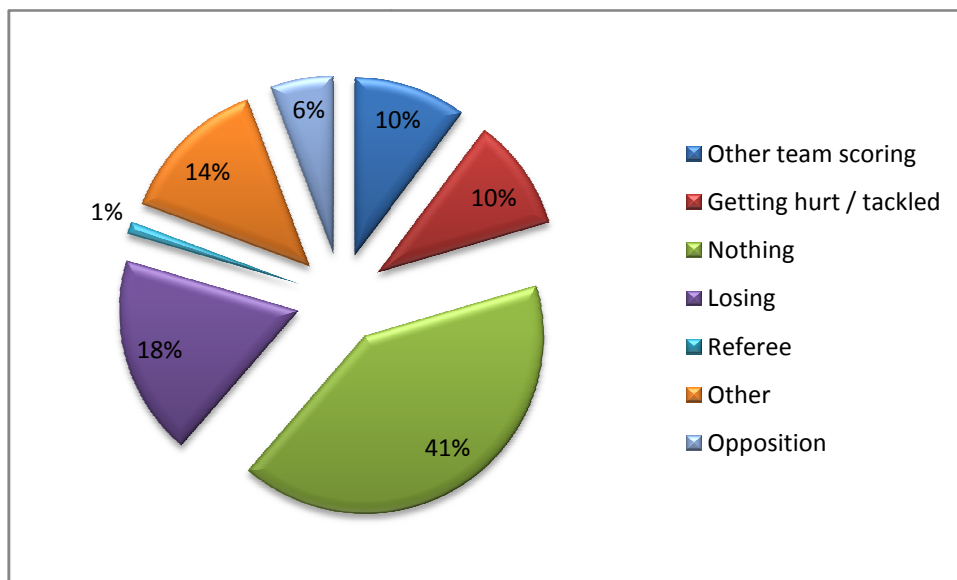
Tackling is the most enjoyed aspect of the U9 game according to these after-match reports (25% AGR; 43% Pilot). Scoring tries (whether as a team or individually) was the second most enjoyed aspect (25% AGR; 13% Pilot).

2. What do you like LEAST about playing rugby?

AGR:

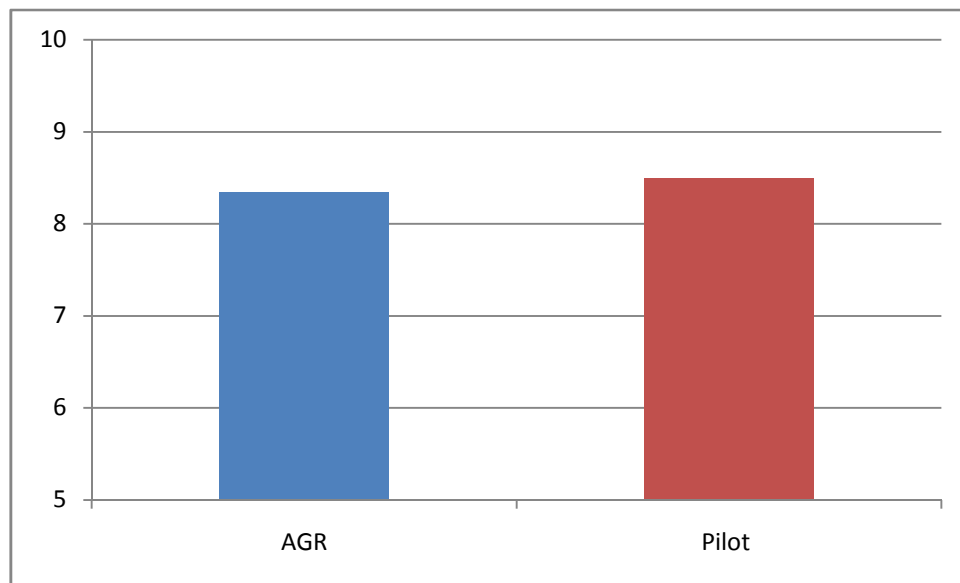


Pilot:



“Other team scoring” was the least enjoyable aspect of the game for players in the AGR games (34%; 10% Pilot) while 41% of the Pilot players said “nothing” (13% AGR). “Getting hurt / tackled” (26% AGR; 10% Pilot) were also less favoured.

3. "How much did you enjoy that game?" (Scale from 0 – 10)



As with the U7's, there were no significant differences in terms of how much the children enjoyed the game ($t_{129} = 0.39, p = .695$)

7 General Discussion

The rationale behind the *Shaping the Game* pilot is to provide developmentally appropriate games at mini rugby level, which are in line with the principles of child development. The results from the data-collected from both pilot and AGR games, especially at Under-9, highlight a shift in emphasis to a child-centred game from a game based on a watered down version and structure of the adult game.

7.1 Under-9

At Under-9, the removal of the structured skills of scrummaging, lines-out, mauling and rucking from the pilot game had a significant impact on the game in a number of key areas:

- **Increased opportunities to develop ‘specialised’ skills through increased involvement**

In the pilot game the players are provided with more opportunities to combine their fundamental movement patterns in more complex forms as specialized skills (Gallahue and Ozmun, 2006). The combination of the ball in play for longer periods and a reduced emphasis on structured contact skills results in a significant difference in the total amount of skills performed between each game. The players involved in the pilot games scored 85% more tries, had twice as many total passes (126%), 37% more runs and completed 16% more tackles. This should also lead to an increase in motivation as it's this action leading to scoring and personal involvement in that action that interests children the most when playing games (Coakley and Pike, 2009).

Enhanced opportunities to develop decision-making skills.

Players are making simple decisions to pass the ball based on what's in front of them (McMorris et al., 2006). With more touches of the ball, individuals need to make more tactical decisions in attack. The results show that players are making significantly more passes in open play in the pilot with nearly 16 being made per 10 minutes compared to 9 in the AGR.

The pilot also has significantly more occurrences of all types of passes, which is probably an effect of shifting the focus on to continuity and reducing the emphasis on contact. Players are off-loading the ball in standing tackle four-times as much in the pilot and are completing three times as many passes from the ground.

- **Higher amount of ball-in-play**

A higher amount of ball-in-play-time in the pilot provides for excellent physiological benefits for children as well as allowing for more tactical and motor skill opportunities. During the pilot game the ball is in play nearly 85% of the time, which is 22% higher than compared to the AGR game. This increase of ball-in-play-time along with the reduced number of players on each side in the pilot game should result in a game of higher intensity with positive fitness benefits for players (Hill-Haas, 2008, Rampinini et al., 2007).

This figure doesn't include the amount of time the ball is held within rucks and mauls, which is likely to further reduce the amount of time ball is in 'play'. For example, during the AGR

games filmed on average there were 12 rucks and 7 mauls per ten minutes. If the ball is held in both rucks and mauls for an average of 10 seconds then that would further reduce the ball-in-play time by over three minutes.

- **Re-emphasising the importance of contact.**

Although structured contact skills are not emphasised in the pilot, contact is still a significant part of the game with over 16% more tackles completed when compared to the AGR. On closer examination there are more tackles to ground and 'held' in the pilot, although the difference is only significant for standing tackles. One possible explanation for this difference may be the result of rewarding the contribution in defence of physically smaller players by allowing a 'grab' tackle in the pilot. Another factor that needs to be considered is that in the AGR many potential standing tackles end up as mauls.

7.2 Under-7

At Under-7 there is a radical reduction between the number of players' in each game from 7v7 in the AGR to 4v4 in the pilot which makes a straight comparison of results difficult. However, the basic results show little difference between both games, with only a significant difference being the 58% more tries scored in the pilot and the 24% more tags in the AGR. A possible explanation for these significant differences could be the size of the playing field. In the pilot the smaller playing field with less distance to the try-line may be the reason for more tries being scored, while the larger field with more players involved increases the amount of tagging. However it is also clear that passes, runs, tries, tags etc. are divided between 7 players per team in the AGR game whereas this reduces to 4 players per team for the Pilot. In this way each child should actually get more involvement in the U7 pilot game compared to the AGR game. Research has shown in invasion games that individual ball possession can increase three fold when there is reduction in the number of players from 7v7 to 3v3 (Rampinini et al., 2007). In order to examine this further we would have liked to have performed an individual analysis of each child's involvement, however it was extremely difficult to track individuals when you do not know them (NB All previous studies which have examined rules changes in age-related team sports have also simply 'followed the ball' for this reason). Our preliminary data does suggest that each player does get more involved in the game in the Pilot rules: 50% of players in the AGR got less than 2 touches every ten minutes compared to only 6% in the pilot. 59% of Pilot players got between 4 and 8 touches in a ten minute period.

We attempted to use bibs to aid the identification of players for individual analyses but found that coaches in most teams were reluctant to allow players to wear them due to the perceived effect on performance and threat of injury. In year 2 of the pilot, we would recommend that we find an effective method of identifying individual players to assist with analysis. This would be groundbreaking work as individual player analysis has yet to be used in any published research examining variations in rules.

Fun and Enjoyment

There was no difference in the level of enjoyment in either the Under-9 and Under-7 games. According to Bailey et al., (2010) fun and enjoyment are complex areas and a highly individual concept, which is a possible explanation to the variety of answers given by players about game enjoyment.

7.3 Acknowledgements

The report authors would like to acknowledge the support and assistance of all members of the Shaping the Game Pilot Review Group (APPENDIX 4), particularly Gary Townsend, Player Development Manager. We would also like to thank all the rugby players, coaches and parents who took part in the study and the University of Exeter students who assisted with data collection. We would also like to thank Prof Tim Coles for brokering the ESRC funding, in partnership with the RFU, which funds the CASE studentship and supports the research project, and Mike England, RFU Community Rugby Medical Director who was responsible for initiating the partnership between the RFU and Exeter University.

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Appendix 1 – Player feedback form



Festival:

Age Group:

Date

How much did you enjoy the game?

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

What one thing did you enjoy the most?

What one thing did you dislike the most?

Team	vs.	
Game		<div></div>

Appendix 2 – Parents/Guardian Survey 2011

SHAPING THE GAME – WHAT DO YOU THINK?

1. What game is your child playing today? (Please tick one box)

☐ U7

| ☐ U9

|

2. How would you best describe the games you have seen today? (Tick one)

☐ Excellent

☐ Very
Good

☐ Good

☐ Poor

☐ Very
Poor

3. How important do you think each of the following statements are for your child when playing mini rugby matches? (Circle one number in each row)

Scoring Tries	Not at all important	1	2	3	4	5	Very Important
---------------	----------------------	---	---	---	---	---	----------------

Having many of touches of the ball.	Not at all important	1	2	3	4	5	Very Important
-------------------------------------	----------------------	---	---	---	---	---	----------------

Tackling successfully.	Not at all important	1	2	3	4	5	Very Important
------------------------	----------------------	---	---	---	---	---	----------------

Experiencing scrums and lines-out.	Not at all important	1	2	3	4	5	Very Important
------------------------------------	----------------------	---	---	---	---	---	----------------

Physical contact	Not at all important	1	2	3	4	5	Very Important
------------------	----------------------	---	---	---	---	---	----------------

Having a good time	Not at all important	1	2	3	4	5	Very Important
--------------------	----------------------	---	---	---	---	---	----------------

Playing with friends	Not at all important	1	2	3	4	5	Very Important
----------------------	----------------------	---	---	---	---	---	----------------

4. Please give two reasons why you want your child to play mini rugby?

a. _____

b. _____

5. Please give two reasons why parents might not want their child to play mini rugby?

a. _____

b. _____

Appendix 3 – Coaches Questionnaire

We are interested in your views of the current rules of Mini Rugby (U7 and U9) and we would be grateful if you would complete the questionnaire. This should take you no more than 10 minutes through a series of careful mouse-clicks. Please follow the instructions carefully and answer only those questions that are relevant to you because for the survey we are seeking views of those who coach at U7 and/or U9. The survey closes on.

YOUR COACHING EXPERIENCE

1. Have you coached U7 or U9 mini rugby during the 2010/11 season?
☐ Yes (go to Q2) ☐ No (Please do not complete this questionnaire)
2. Have you coached U7 mini rugby during the 2010/11 season?
☐ Yes (go to Q3) ☐ No (go to Q21 – coached U9 only)

SHAPING THE U7 GAME – WHAT DO YOU THINK?

3. In your view, what attracts children to playing U7 mini rugby? Please rank the two most important reasons. (Indicating the Most Important and the Next Most Important)

- | | |
|---|---|
| <input type="checkbox"/> Excellent exercise for children | <input type="checkbox"/> Playing with friends |
| <input type="checkbox"/> Rugby is an exciting game | <input type="checkbox"/> Family interested in rugby |
| <input type="checkbox"/> Opportunity to be a member of a team | <input type="checkbox"/> Emulate their idols |

4. Please rate the following features of U7 rugby matches.
(Please tick one box on each line)

	Very Important	Important	Insignificant	Negligible
Coaching on the pitch during games.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All players having lots of touches of the ball.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Small pitches.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tagging opportunities for everyone.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
High amount of tries being scored.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
An offence for a "Knock-on".	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. Why would children **NOT WANT TO** play U7 mini rugby? Please rank the **TWO** most important reasons from the following statements. (Indicating the Most Important and the Next Most Important)

<input type="checkbox"/> Fear of getting hurt	<input type="checkbox"/> Playing during the winter
<input type="checkbox"/> Friends not interested in rugby	<input type="checkbox"/> Never touching the ball during games
<input type="checkbox"/> Prefer football	<input type="checkbox"/> Parents not interested in rugby
<input type="checkbox"/> Afraid of looking foolish	<input type="checkbox"/> Interested in doing other activities

6. Ideally, how many players do you think should be on each team in an U7 game?
(Tick one only)

<input type="checkbox"/> 3v3	<input type="checkbox"/> 4v4	<input type="checkbox"/> 5v5	<input type="checkbox"/> 6v6	<input type="checkbox"/> 7v7
<input type="checkbox"/> 8v8	<input type="checkbox"/> 10 v 10	<input type="checkbox"/> 13 v 13	<input type="checkbox"/> 15 v 15	

7. Please respond to the following statements about U7 rugby matches.
(Please tick one box on each line)

	Disagree Strongly	Disagree	Agree	Agree Strongly
A coach shouldn't referee games.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It's important for children to enjoy the game.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Too many stoppages spoil the game.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lots of passing is crucial for player development.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tackling should be allowed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Playing positions aren't needed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Winning is important.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

THE U7 CONTINUUM GAME

8. Have you ever coached the U7 continuum game (i.e. the current rules)?

☐ Yes (go to Q9)

☐ No (go to Q12 – coached U7 pilot rules only)

9. How would you best describe the U7 continuum game? (Tick one)

☐ Excellent

☐ Good

☐ Poor

☐ Very
Poor

10. Does the continuum U7 game need to be changed?

☐ Yes

☐ No

11. Please give your main reason for your answer to question 10.

THE U7 PILOT GAME

12. Have you coached the U7 pilot game (i.e. the new rules)?

☐ Yes (go to Q13)

☐ No (go to Q21)

13. How would you best describe the U7 pilot game? (Tick one)

☐ Excellent

☐ Good

☐ Poor

☐ Very
Poor

14. Should the pilot game be played by all U7 teams in England?

☐ Yes

☐ No

15. Please give your main reason for your answer to question 14.

16. Have you coached **both** the U7 pilot (new rules) and U7 continuum (current rules)?

☐ Yes (go to Q17)

☐ No (go to Q21)

COMPARING THE U7 PILOT WITH THE U7 CONTINUUM

This section should only be completed by coaches who have coached using **both** sets of pilot rules and continuum rules in their 'career'.

17. Please respond to **one** of these statements only:

- ☐ The U7 pilot game is a better game than the U7 continuum game.
- ☐ Both the U7 pilot and U7 continuum are equal games of rugby.
- ☐ The U7 continuum game is a better game than the U7 pilot game.

18. Please respond to the following statements: (Please tick **one** box on each line)

	Disagree Strongly	Disagree	Agree	Agree Strongly
All Kids have more touches of the ball in the pilot .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Players enjoy the continuum game more.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There are fewer chances to tag in the continuum .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The pilot pitch is the right size.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Seven in a team is too many.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coaching the pilot game is easier	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The continuum gives all kids more playing time.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The pilot is more of a free flowing game.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coaches shouldn't referee games.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Allowing "knock-ons" encourages mistakes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

19. Please respond to one of these statements only:

- ☐ The pilot game should replace the continuum game at U7 in England
- ☐ The pilot game should continue alongside the continuum game.
- ☐ The continuum game should continue and the pilot game should not replace it

20. Please give your main reason for your answer to question 19.

SHAPING THE U9 GAME – WHAT DO YOU THINK?

21. Have you coached U9 mini rugby during the 2010/11 season?

☐ Yes (go to Q22) ☐ No (go to Q40 – coached U7 only)

22. Ideally, how many players should be on each team in an Under-9 game? (Tick one only)

☐ 3v3 ☐ 4v4 ☐ 5v5 ☐ 6v6 ☐ 7v7
☐ 8v8 ☐ 10 v 10 ☐ 13 v 13 ☐ 15 v 15

23. What attracts children to playing U9 mini rugby? Please rank the two most important reasons. (Indicating the Most Important and the Next Most Important)

<input type="checkbox"/> Excellent exercise for children	<input type="checkbox"/> Playing with friends
<input type="checkbox"/> Rugby is an exciting game	<input type="checkbox"/> Family interested in rugby
<input type="checkbox"/> Opportunity to be a member of a team	<input type="checkbox"/> Emulate their idols

24. Please rate the following features for U9 rugby matches.

(Please tick one box on each line)

	Very Important	Important	Insignificant	Negligible
Rucking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coaching on the pitch during games.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Scrum	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All players having lots of touches of the ball.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Kicking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Successful tackles made by everyone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
High number of passes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mauls	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off loading	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lines-out	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

25. Why would children **NOT WANT TO** play U9 mini rugby? Please rank what you think are the **two** most important reasons from the following statements. (Indicating the Most Important and the Next Most Important)

<input type="checkbox"/> Fear of getting hurt	<input type="checkbox"/> Playing during the winter
<input type="checkbox"/> Friends not interested in rugby	<input type="checkbox"/> Never touching the ball during games
<input type="checkbox"/> Prefer football	<input type="checkbox"/> Parents not interested in rugby
<input type="checkbox"/> Afraid of looking foolish	<input type="checkbox"/> Interested in doing other activities

26. Please respond to the following statements about U9 rugby matches:
(Tick one box for each row)

	Disagree Strongly	Disagree	Agree	Agree Strongly
A coach should referee games.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Children's enjoyment is important	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lines-out aren't needed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Too many stoppages spoil the game.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lots of passing is crucial for player development.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mauling is important.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Playing positions are needed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A grab below the arm pits should be allowed as a tackle.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Children need to scrummage at this age.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rucking isn't needed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

THE U9 CONTINUUM GAME

27. Have you ever coached the U9 continuum game (i.e. the current rules)?

- ☐ Yes (go to Q28) ☐ No (go to Q31– coached U9 pilot rules only)

28. How would you describe the U9 continuum game? (Tick one)

- ☐ Excellent ☐ Good ☐ Poor ☐ Very Poor

29. Does the continuum U9 game need to be changed?

- ☐ Yes ☐ No

30. Please give your main reason for your answer to question 27.

THE U9 PILOT GAME

31. Have you ever coached the U9 pilot game (i.e. the new rules)?

- ☐ Yes (go to Q32) ☐ No (go to Q40)

32. How would you best describe the U9 pilot game? (Tick one)

- ☐ Excellent ☐ Good ☐ Poor ☐ Very Poor

33. Should the pilot game be played by all U9 teams in England?

- ☐ Yes ☐ No

34. Please give your main reason for your answer to question 33.

35. Have you coached both the U9 pilot (new rules) and U9 continuum (current rules)?

- ☐ Yes (go to Q36) ☐ No (go to Q40)

COMPARING THE U9 PILOT WITH THE U9 CONTINUUM

*This section should only be completed by coaches who have coached using **both** sets of pilot rules and continuum rules in their 'career'.*

36. Please respond to one of these statements only:

- ☐ The U9 pilot game is a better game than the U9 continuum game.
- ☐ Both the U9 pilot and U9 continuum are equal games of rugby.
- ☐ The U9 continuum game is a better game than the U9 pilot game.

37. Please respond to the following statements: (Tick one box for each row)

	Disagree Strongly	Disagree	Agree	Agree Strongly
There's more flow to a game without scrums.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Players enjoy the continuum game more.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nine in a team is too many.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Kids tackle better in the continuum .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lines-out give structure to the game.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All players have more touches of the ball in the pilot .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There's less passing in the continuum .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mauling slows down the game.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The pilot game is similar to rugby league.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rucking gives the defence a chance to win possession.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

38. Please respond to **one** of these statements only:

- ☐ The pilot game should replace the continuum game at U9 in England
- ☐ The pilot game should continue alongside the continuum game.
- ☐ The continuum game should continue and the pilot game should not replace it

39. Please give your main reason for your answer to question 38.

SOME QUESTIONS ABOUT YOU

40. What is your gender?

☐ Male

☐ Female

41. What is your age?

☐ 17 and under

☐ 18-24

☐ 25-34

☐ 35-44

☐ 45 - 54

☐ 55 - 64

☐ 65+

42. How many seasons in total have you coached Mini Rugby (U7 to U11)? _____

43. Which age range(s) did you coach during the 2010/11 season? (Please tick all that apply)

☐ U7 Pilot

☐ U7 Continuum

☐ U8

☐ U9 Pilot

☐ U9 Continuum

☐ U10

☐ U11

44. How many players were in your squad at the start of the 2010/11 season? _____

45. How many players were in your squad at the end of the 2010/11 season? _____

46. Please give your main reason for any change in squad size.

47. How many seasons in total have you coached at U7? _____

48. How many seasons in total have you coached at U9? _____

49. What's the highest level you've coached? (Tick one)

☐ Mini rugby (U7 - U11)

☐ Juniors rugby (U12- U16)

☐ Youth/Colts rugby

☐ Senior rugby

☐ Professional rugby

☐ International

50. Why did you start coaching at mini rugby level?

- ☐ Child playing in the team ☐ Something to do after I retired as a player.
- ☐ Wanted coaching experience ☐ Other: _____

51. Will you coach at the same age group next season? (e.g. stay at U7 or stay at U9)

- ☐ Yes ☐ No

52. Will you coach the same team at the next age group? (e.g. Move from U7 to U8)

- ☐ Yes ☐ No

53. Please give your main reason for your answer to question 49.

54. Are you related to a child in your team?

- ☐ Yes (**continue with question 52**) ☐ No (**go to question 53**)

55. What is your relationship? (Tick one)

- ☐ Parent/Guardian ☐ Uncle ☐ Brother ☐ Sister
- ☐ Grandparent ☐ Auntie ☐ Other: _____

56. What's the highest coaching qualification you have? (Tick one)

- ☐ Level ____ (e.g. Level 3)
- ☐ Foundation course
(Rugby Leaders foundation, start coaching tag rugby, start coaching rugby ready).
- ☐ None

57. What's the highest level of rugby you've played? (Tick one)

- ☐ Mini ☐ School
- ☐ Youth ☐ Adult Club
- ☐ County ☐ Divisional
- ☐ Semi-professional ☐ Professional
- ☐ International

Appendix 4 – Pilot Review Group

Colin Horsley (Durham)
Tony Timms (Warwickshire)
Duncan Parker (Hampshire)
Stuart Potts (Schools & Youth Governance)
Gavin Williams (RFU CPDO)
Colin Major (Age Grade Review)
Gary Townsend (RFU Player Development Manager)

Appendix 5

Data provided by Darlington Mowden Park Rugby Football Club (DMP RFC) Minis Section

6 February 2011

U7 Pilot and AGR Games

SHAPING THE GAME	AGR
Raw observations: Length of play observed: 8 mins No. of passes: 69 No. of tags: 10 No. of tries: 16 No. players: 8	Raw observations: Length of play observed: 8 mins No. of passes: 35 No. of tags: 13 No. of tries: 9 No. players: 14
Averages (per minute): No. of passes per Min: 9 $(69 \div 8 = 8.6)$ No. of tags per Min: 1 $(10 \div 8 = 1.25)$ No. of tries per Min: 2 $(16 \div 8 = 2)$	Averages (per minute): No. of passes per Min: 4 $(35 \div 8 = 4.38)$ No. of tags per Min: 2 $(13 \div 8 = 1.63)$ No. of tries per Min: 1 $(9 \div 8 = 1.12)$
Averages (per player over the 8 mins of play): No. of passes per player: 9 $(69 \div 8 = 8.62)$ No. of tags per player: 1 $(10 \div 8 = 1.25)$ No. of tries per player: 2 $(16 \div 8 = 2)$	Averages (per player over the 8 mins of play): No. of passes per player: 3 $(35 \div 14 = 2.5)$ No. of tags per player: 1 $(13 \div 14 = 0.92)$ No. of tries per player: 1 $(9 \div 14 = 0.64)$