



THE MANCHESTER UNITED 4 v 4 PILOT SCHEME FOR U9s: PART II – THE ANALYSIS

RICK FENOGLIO

In the Summer 2003 issue of *Insight*, the aims, format and underlying coaching philosophy of the Manchester United 4 x 4 Pilot Scheme were highlighted and discussed. In this article, the results of a year long study on The Pilot Scheme, and its relative merits, are presented. Two types of data were collected from a wide variety of sources and individuals associated with The Pilot Scheme: (1) quantitative match analysis data from 4 v 4 and 8 v 8 Academy matches involving Under 9 players and heart rate data from a local development team and (2) qualitative data on the perceptions, feelings and opinions about The Pilot Scheme from Academy Directors, Assistant Academy Directors, Club coaches, parents, players and other observers of The 4 v 4 Pilot Scheme over the 2002-2003 football season. The results which follow are divided into four sections and were validated by appropriate statistical methods (in the case of the quantitative data) and by data and analysis triangulation and respondent validity (in the case of the qualitative data).

SECTION I. Video Match Analysis and Heart Rate Data

With permission, Northern Academy 4 v 4 Pilot Scheme and 8 v 8 matches involving 10 Premier League Academy teams were videotaped between the months of October 2002 and March 2003. From these, three, 8-min video segments from each of the two game formats (4 v 4 and 8 v 8) were analysed for the following performance parameters: the number of: Passes (Successful/Unsuccessful), the number of Shooting Attempts (Shots off target/Shots on target but saved/Goals), the number of 1 v 1 Encounters (Lost Ball/Gained an Advantage/No Advantage Gained but Retained Ball) and the number of Dribbling Skills (Tricks)

demonstrated (Step over/Drag back/Cruyff turn/Feint/Others). To account for the relative (4 v 4) training status of the Manchester United players and to allow direct comparison with the 4 v 4 based games, all three 8 v 8 games involved Manchester United players. However, the 4 v 4 games involved players from various Academies playing each other (and Manchester United) either during weekly scheduled fixtures or during a 4 v 4 mini – festival held at Littleton Road Training Ground, Salford. Because of the difficulty obtaining heart rate data during formal Academy matches, match heart rates were obtained from Under 8, Under 9 and Under 10 players (matched for overall ability) from a local development team (FC Alderley Edge) playing the 8 v 8 and 4 v 4 Pilot Scheme game formats.

RESULTS (I): During Academy fixtures and compared to similar-duration 8 v 8 game segments, the 4 v 4 based games, on average, increased the Number of Passes by 135%, the

number of Scoring Attempts by 260%, the number of Goals Scored by 500%, the number of 1 v 1 Encounters by 225% and the number of Dribbling Skills (Tricks) demonstrated by 280% (see Figures 1a – 1d). Assuming an equal amount of possession by both teams during 4 v 4 and 8 v 8 games, players from Manchester United who played fifteen 4 v 4 based Pilot Scheme Academy fixtures had:

- 585 more passes
- 481 more scoring attempts
- 301 more goals
- 525 more 1 v 1 encounters, and
- demonstrated 436 more dribbling skills (tricks)

than players from teams who did not play 4 v 4 based Academy fixtures. These figures do not include 4 v 4 friendly matches or any 4 v 4

Table 1 RANK ORDER OF RAW MATCH DATA FROM THREE 4 V 4 BASED AND THREE 8 V 8 GAME EIGHT MINUTE SEGMENTS

Number of Passes	Scoring Attempts	Goals	1 v 1 Encounters	Dribbling Skills (Tricks)
2- Goal Game (170)	4- Goal Game (62)	Line-Ball (37)	GK Game (92)	Line Ball (58)
Line Ball (160)	GK Game (49)	4-Goal Game (28)	Line Ball (56)	4-Goal Game (45)
GK Game (149)	2- Goal Game (44)	2-Goal Game (18)	4-Goal Game (52)	2-Goal Game (39)
8 v 8 (108)	8 v 8 (20)	GK Game (17)	2-Goal Game (51)	GK Game (36)
4- Goal Game (106)	Line Ball (Not Applicable)	8 v 8 (5)	8 v 8 (28)	8 v 8 (16)

Table 2 POSITIVE AND NEGATIVE COMMENT CATEGORIES AND RESPONSE TALLIES RELATING TO THE 4 v 4 PILOT SCHEME

POSITIVE COMMENTS ABOUT THE 4 v 4 PILOT SCHEME	A	B	C	NEGATIVE COMMENTS ABOUT THE 4 v 4 PILOT SCHEME	A	B	C
The Scheme was enjoyable /more enjoyable than 8 v 8	(29)	(18)	(12)	The 4 v 4 games are less competitive than 8 v 8	(-)	(11)	(-)
In The Pilot Scheme the players always / more involved	(19)	(4)	(7)	Supervision of players was lacking or more difficult	(7)	(-)	(-)
The Scheme was well organised	(13)	(1)	(5)	The 4 v 4 games did not improve positional awareness	(5)	(2)	(-)
Players get more chances to express themselves	(12)	(4)	(7)	The parents didn't understand it	(4)	(5)	(1)
4 v 4 games are challenging/more challenging than 8 v 8	(9)	(-)	(3)	The 4 v 4 games are less competitive than 8v8	(3)	(1)	(-)
There is less emphasis on winning than 8 v 8	(9)	(9)	(4)	The 4 v 4 games are less exciting to watch than 8 v 8	(-)	(4)	(-)
The 4 v 4 improves techniques more	(9)	(6)	(5)	Its difficult to compare the teams competing	(-)	(4)	(-)
Pilot Scheme is a good learning environment	(9)	(4)	(8)	The Scheme is too expensive to run	(3)	(-)	(-)
Players take more responsibility for their own actions	(7)	(-)	(-)	Unique facilities are needed to run The Scheme	(3)	(-)	(-)
The Pilot Scheme builds player confidence	(6)	(4)	(2)	The 4 v 4 games were too one-dimensional	(3)	(3)	(-)
The Scheme is/was worthwhile	(6)	(11)	(3)	The Pilot Scheme was nothing new	(3)	(1)	(-)
The Scheme improves decision making	(5)	(-)	(-)	The 4 v 4 games did not improve defensive awareness	(3)	(1)	(-)
The Scheme improves dribbling skills	(4)	(-)	(1)	The 4 v 4 games did not improve crossing	(1)	(-)	(-)
There is less pressure (generally) in The Scheme	(4)	(3)	(3)	The 4 v 4 games did not improve off the ball running	(1)	(-)	(-)
There is less pressure from coaches in The Scheme	(4)	(4)	(6)	The 4 v 4 games did not improve heading	(1)	(-)	(-)
The Scheme improves overall development	(4)	(14)	(10)	The Scheme benefits Manchester United primarily	(1)	(3)	(-)
The lack of positions aids player development	(4)	(-)	(1)	In 4 v 4 the errors go uncorrected	(1)	(-)	(1)
The Scheme improves short passing	(3)	(1)	(2)	In 4 v 4 the stronger boys dominate	(1)	(3)	(-)
In the Scheme there is less pressure from parents	(3)	(1)	(2)	The Pilot Scheme is too similar to training	(1)	(3)	(-)
The Scheme improves tactical awareness	(3)	(2)	(2)	During The Pilot Scheme player's interest waned	(1)	(-)	(1)
During the Scheme you can assess players better	(2)	(1)	(2)	Players don't learn how to cope with winning or losing	(1)	(-)	(-)
The 4 v 4 games increases number of touches	(2)	(-)	(2)	The 4 v 4 games are more tiring	(-)	(1)	(-)
Line ball game was best	(2)	(1)	(2)	The 4 v 4 games need goals and nets	(1)	(1)	(-)
The Goalkeepers game was best	(2)	(-)	(1)				
The 4 v 4 games improve reaction time / more than 8 v 8	(1)	(-)	(-)	Subtotal Number of Negative Comments	(44)	(43)	(3)
The 4 v 4 improves 1v1 / more than 8 v 8	(1)	(-)	(1)				
The 4 v 4 improves scoring opportunities / more than 8 v 8	(1)	(1)	(1)	TOTAL NUMBER OF NEGATIVE COMMENTS		80	
The 4 v 4 improves switching of play / more than 8 v 8	(1)	(-)	(-)				
The 4 v 4 improves creation of space / more than 8 v 8	(1)	(-)	(-)				
4 v 4 improves transition from offence to defence	(1)	(-)	(-)				
The 4 v 4 is as competitive / more competitive as 8v8	(1)	(-)	(-)				
The two goal game is/was best	(1)	(1)	(1)				
Subtotal Number of Positive Comments	(178)	(90)	(93)				
TOTAL NUMBER OF POSITIVE COMMENTS		361					

Key

A

Number of Comments from Academy Directors, Asst Academy Directors & Club Coaches)

B

Number of Comments from MUFC and other Academy Parents

C

Number of Comments from Other Observers of The Pilot Scheme

festival matches which the Manchester United players participated in during the 2002-2003 season. Furthermore, it must be stated that these figures are approximations based upon sample match segments and follow-up studies are needed. Nevertheless, **the results do highlight the superiority of the 4 v 4 games in**

providing significantly increased opportunities for Under 9 players to pass, shoot, score and successfully handle 1 v 1 situations.

The mean scores and rank order of the various 4 v 4 Pilot Scheme games and 8 v 8 formats for the match parameters analysed can be found in Table 1. These results show that the different

match parameters were increased most by a different 4 v 4 game format. This indicates that the selection of 4 v 4 games chosen for The Pilot Scheme was also appropriate to develop the parameters analysed in this study. Heart rate data indicated that the 4 v 4 games resulted in mean heart rates that were approximately 8-10 beats/min lower than in the 8 v 8 game segments. This is considered to be result of the pitch dimensions in the 4 v 4 based game. Theoretically at least, the decreased energy demands of the 4 v 4 based games would be more appropriate for technical development in young players, due to a greater reliance being placed upon immediate and phosphagen-based sources of ATP and decreased short-term fatigue.

SECTION II. Academy Directors, Assistant Academy Directors, Academy Club Coaches and Other Observers

Semi-structured interviews and feedback in written form from Academy Directors, Assistant Academy Directors, Club Coaches and other observers were obtained on their perceptions of The Pilot Scheme. Other observers included national football administrators, coaches, physiotherapists, sport scientists and others.



Documents and letters were written formally from each Club (N=18) or by a Club coach/observer and sent to the organiser of The Pilot Scheme at Manchester United FC, Mr Tony Whelan. At the end of The Pilot Scheme, Mr Whelan then passed these to the Research Team for analysis. Semi-structured interviews were also held with Club Coaches (N=6) immediately after a 4 v 4 Pilot Scheme fixture or via telephone. The verbatim scripts from these discussions were then coded and analysed using established qualitative methods. Relevant individual comments (called *meaning units*) were then classified as being either a **positive** comment about The Pilot Scheme, a **negative** comment about The Pilot Scheme or an initial **verdict** statement about The Pilot Scheme. A **verdict** statement was one which directly addressed issues relating to the future of the Academy matchday programme at the respondent's Club or in general.

RESULTS (II): The results showed that there were 178 (80%) **positive** comments about the 4 v 4 Pilot Scheme, 44 (20%) **negative** comments about the Scheme and 14 verdict statements about The Pilot Scheme. Samples of these can be found in Tables 2 and 3. The results from eighteen Other Observers of The Pilot Scheme showed that there were 93 (97%) **positive** comments and 3 (3%) **negative** comments made about The Scheme.

SECTION III. Manchester United and other Academy Club Parents

Semi-structured interviews, unstructured interviews and questionnaire data were also obtained from parents of Manchester United and away team players on their thoughts, feelings and perceptions about The Pilot Scheme.

RESULTS (III): The results from 24 pages of interview transcripts from twenty-three



Manchester United parents showed that there were 90 (68%) **positive** comments about the 4 v 4 Pilot Scheme, 43 (32%) **negative** comments about the Scheme. Not included in Table 3 are the comments and feedback from parents of a rival Club (N=13) who completed a short questionnaire while watching an early Pilot Scheme fixture. To summarise, away team parents were generally not supportive of The 4 v 4 Pilot Scheme. The reasons given for this were that The Pilot Scheme was 1) Too much like training 2) Not as exciting to watch/less competitive and 3) Difficult to understand.

SECTION (IV): Manchester United players

With parental and Club permission, short, informal semi-structured interviews were conducted with Under 9 players (N=16) using

an informal, group (4/5 players each) interview format. Two researchers (for child protection reasons) away from Club coaches and parents prior to an Under 9 training night at Littleton Road Ground, Salford, conducted interviews in April 2003.

RESULTS (IV): To summarise these responses, the Manchester United players enjoyed playing both the 8 v 8 and 4 v 4 formats. In response to direct questioning, 75% preferred the 4 v 4 games. When asked which of the two formats were better for their overall football development, all the players responded that the 4 v 4 games were better, due to the games' ability to allow them to practice their skills and techniques. Regarding the 8 v 8 games, the players enjoyed the excitement of the 8 v 8 games; and enjoyed 'shooting into real goals'. The players also understood the aims of The Pilot Scheme. When asked if it was better that the coaches did not instruct or shout as much during the 4 v 4 games, one player responded

'Yea, it is better. When my old coaches used to do that in front of my parents and friends, it was like really embarrassing!'

All Responses

From all responses, there were 361 (80%) **positive** comments and 80 (20%) **negative** comments about The 4 v 4 Pilot Scheme during the 2002 / 2003 season (see Table 3).

Discussion

The two match-day game formats analysed in this study offered their participants very different playing experiences. The 4 v 4 based games of The Pilot Scheme brought significantly more challenges to Under 9 players in the areas of passing, shooting, scoring, dribbling and handling 1 v 1 situations. These challenges were, according to the **negative** responses (see Figure 4), perhaps at the expense of increases in tactical awareness and physical 'competitiveness'. The 8 v 8 heart rate data in this study support data by Caprinica (2001) who found that heart rates in 7 v 7 games were very similar to those found in 11 v 11 games for pre-pubescent players. This is further evidence that the two game formats

Table 3 4 v 4 PILOT SCHEME VERDICTS

Sample Verdict Statements about the 4 v 4 Pilot Scheme from non – MUFC Academy Coaches

"I fully support your way forward and welcome trial notions/ideas to this course. I think it would work well in conjunction with 8v8 for a thorough educational programme of match play."

"We as an academy are in full support of the initiative and would welcome further discussion on the idea and ways of implementing it into the games programme. If we were asked tomorrow if we would do 4v4 next year for our under 9s at home I would say yes definitely. That's what I mean by 'buy into it'."

"Now that we have seen first hand the pilot scheme we are still in the opinion that the type of practices and set ups used are regularly used by us in training so when the boys come to a Sunday they are ready to play an 8aside game."

"My own personal view is in line with what has already been said, and I retain an open mind on this issue. At the moment, from the brief experience so far, it is too early to form an opinion as to whether this practice is better for the development of young players."

"We will continue to play 4v4 within our academy programme and provide our full support to your scheme whenever we have fixtures with Manchester United."

"We wholeheartedly agree with the concept of 4v4 Games and their use within any development programme, but would not, at this stage, be in favour of replacing the current match programme i.e. 8v8 for a 4v4 version. We would be willing to be part of any continuing debate on the philosophy of young player development."

"I have discussed implementing this format of play at our Academy and it has been agreed to be of value in theory by the coaching staff"

"It was the first time we have been involved in that format and it is something we would pursue in the future"

"We are now utilizing the pilot scheme with our under 9s on a regular basis at the moment"

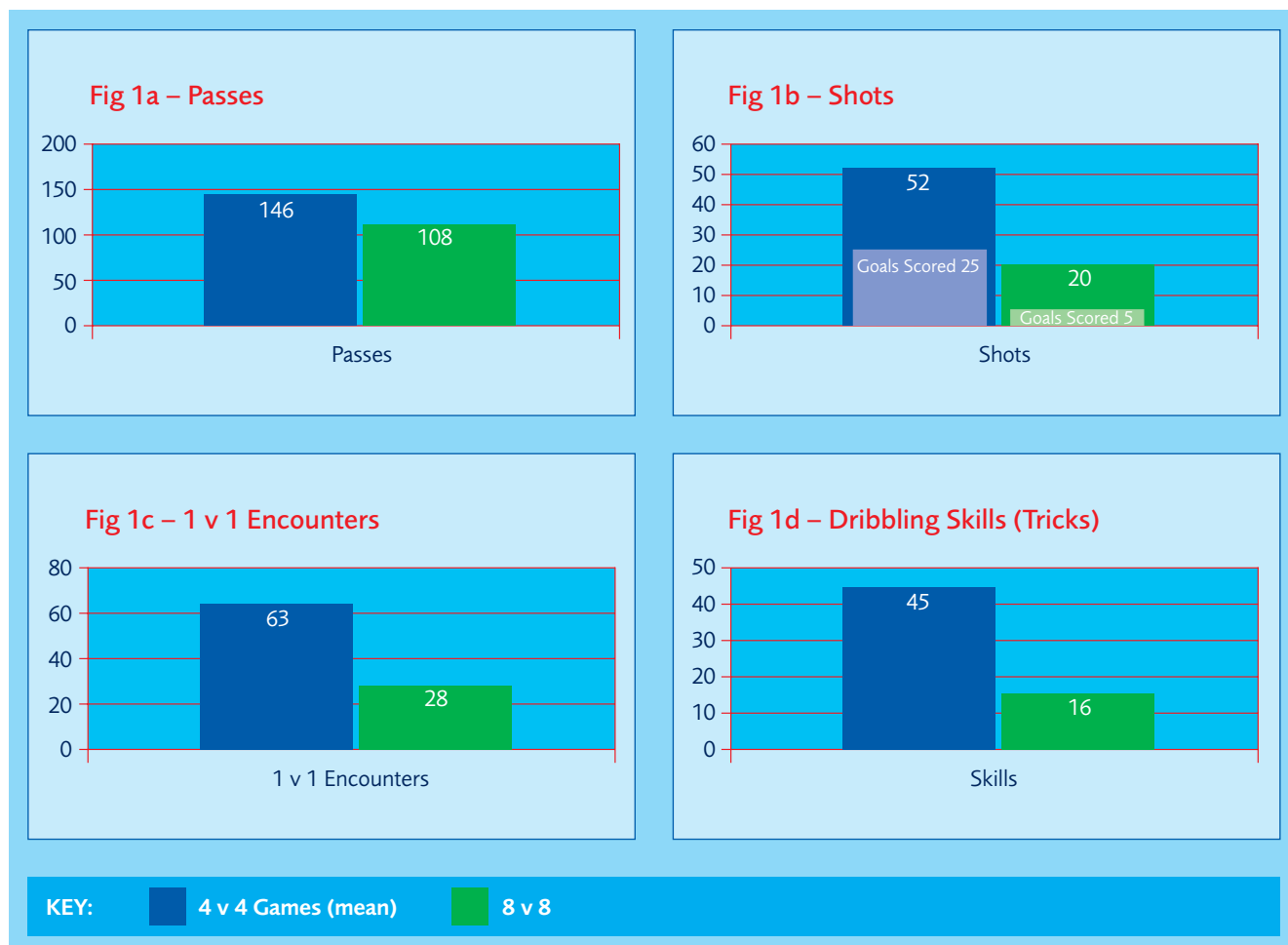


FIGURE 1: Comparison of 8 v 8 and 4 v 4 game formats for selected match parameters. Data was obtained from match analysis of three 8 minute segments of the different game formats. The 4 v 4 data are 'mean data' from the four Pilot Scheme games

(4 v 4 and 8 v 8) challenge players in very different ways. Clubs wishing to stress technical and skill development at the Under 9 age group would benefit from playing 4 v 4 based games. In terms of pre-pubescent neuromuscular development, this approach may be more appropriate for this age group. For such Clubs, implementing a match day programme which adheres to this philosophy and which also offers more technical challenges to their players seems sensible. The 4 v 4 Pilot Scheme has also incorporated several other characteristics which take much of the 'heat' out of Under 9 Academy fixtures and attempted to give more ownership of the play back to the young players. Conversely, clubs wishing to provide for their players a more competitive and physical experience that is tactically closer to eleven-a-side football would probably not wish to 'buy-into' The Pilot Scheme programme or its philosophy. What is essential is the construction a refined set of football experiences in which the technical development of players at this age group can flourish. The 4 v 4 Pilot Scheme is a bold concept that challenges coaches and observers to rethink the match day programme from the perspective of the young player and his experiences. Although 4 v 4 is not new,

incorporating key aspects of street football (which lies at the heart of The Pilot Scheme) into the more formal structure of the Academy matchday fixture programme is an innovative development. These developments seem to have already reaped significant rewards for its young participants.

In conclusion, the 4 v 4 based games of The

Pilot Scheme offered players a significantly higher number of touches (as defined by the number of passes, shots, goals, 1 v 1 encounters and dribbling skills) than comparable 8 v 8 games. Furthermore, large differences between the two playing formats were found to exist. It appears that 4 v 4 based games and the playing environments are better for developing more skilful young players.



Rick Fenoglio is a Senior Lecturer at the Department of Exercise and Sport Science at the Manchester Metropolitan University. He holds The FA Fitness Trainers' Award and currently provides sport science support to the Football Association of Wales. A BASES accredited exercise physiologist, he has worked with numerous professional clubs and players.