



Bridging the Gap...

**Research to provide insight into the
development and retention of young athletes**

Prepared by Simon Shibli and David Barrett, Sport Industry Research Centre for England Athletics

Foreword

We hope that you enjoy and benefit from reading this report. It was commissioned by England Athletics to the Sheffield Hallam International Research Centre in early 2011. It is a study that was initiated with providers, organisers and enablers of youth athletics in mind. The report is by no means definitive and indeed, does what many research studies of this nature do; it poses more questions and potentially highlights the need for further research as we scrape beneath the surface of an age old topic that creates much debate and discussion up and down the land amongst competition providers, coaches, administrators, teachers and parents.

Some readers may not find some of the findings surprising. We make no apologies for this, rather we suggest that reaffirmation of knowledge or perspective in this context is a positive aspect of the study. However, despite any respective restrictions that may have limited the scope of the study, we hope that reports such as this one will stimulate constructive discussion and debate amongst those who are engaged in making decisions. We hope that the report will provide some readers with reassurance based on statistical fact, but in other cases with provide a greater insight and understanding into one of the key performance and development challenges faced by our sport, namely; how do we retain as many young athletes in the sport as we can but in addition how do we develop and condition those to give them to best opportunity to succeed as seniors?

Ultimately the intent is that reports such as this one will help to ensure that all our efforts are invested with the best long term interests of young athletes in mind.

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Prepared by:
Simon Shibli and David Barrett
Sport Industry Research Centre
Sheffield Hallam University
A118 Collegiate Hall
Sheffield
S10 2BP
www.shu.ac.uk/research/sirc

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Executive Summary

This report is concerned with junior talented athletes in the United Kingdom in order to inform the work of the Competition Review Group of England Athletics. The focus of the research is on young talented athletes and concentrates specifically on: performance; progression; retention in the sport; and drop out from the sport. Our background reading and analysis of secondary data identified the key points outlined below.

- ◆ Athletes do not achieve their peak performance until well into adulthood. On average this is around 26 for men and 25 for women.
- ◆ Previous research into young elite athletes in the UK reveals that over a ten year period 41% were no longer involved with athletics.
- ◆ In terms of athlete progression a study of 560 top 20 Under 15 athletes revealed that 10 years later 7% were still ranked in the top 20 for any event.

Using the Power of Ten database we tracked the top 20 athletes in 17 events from when they were Under 15s in 2005 to when they were Under 20s in 2010. The aim of this part of the research was to quantify retention in the sport and progression as measured by improved relative performance (ranking) and improved absolute performance (time, distance, height).

- ◆ The cohort of athletes tracked from Under 15 level in 2005 to 2010 has a retention rate of 48% over the six year period.
- ◆ The vast majority (90%) of young athletes in the sample competed in the same events in 2010 as they did in 2005. This finding points to high levels of early specialisation.
- ◆ Of the 513 athletes who were ranked in the top 20 as Under 15s, 12% retain this status as Under 20s.
- ◆ Endurance and combined events have a higher level of retention than other events. Combined events have a high retention rate within the sport but the lowest level of retention within the category, suggesting that there is a degree of specialisation to a narrower range of events in the progression to Under 20 level and above.
- ◆ Athletes ranked in the top 20 for two or more events have a significantly higher retention rate than those ranked in the top 20 for just one event. This pattern is replicated when the data are sub analysed by gender.
- ◆ The very best junior athletes tend to show year on year improvement in both rankings (relative) and times / distances (absolute) as well as convergence towards the best performances in the world, although these instances are rare.
- ◆ Events involving hurdles or throwing implements show event-specific patterns of progression as athletes get used to higher hurdles and the heavier weights in throws.

In order to move beyond the analysis and interpretation of 'hard' performance statistics, we also interviewed current athletes, former athletes and current coaches to search for 'softer' meanings such as why some people progress whilst others drop out. We interviewed 30 athletes still in the system; 16 athletes who had dropped out; 15 successful international athletes and 10 elite coaches. The interviews covered a wide range of issues concerning: their early experiences; their training and competition environment; their training commitment; and their support networks and systems. The key findings are outlined below.

- ◆ The most common routes into athletics for our sample were either talent identification by school teachers who referred young people to clubs, or via parents who were athletes / athletics club members themselves.



- ◆ Generally athletes experienced a broad based introduction to athletics and specialisation tends to increase with age.
- ◆ Coaches acknowledge that all round athleticism is important, even if this means that youngsters they have trained switch to other sports.
- ◆ There are mixed responses to the supportiveness of schools which seems to vary according to the personalities and key personnel within particular schools.
- ◆ The clear preference among elite coaches is that, to begin with, athletes should engage in an array of athletic disciplines, with specialisation following at a later stage.
- ◆ Whilst almost all athletes enjoyed competition, coaches have mixed views about it – notably the transition for junior to senior and inappropriate competition in club events to earn points.
- ◆ As athletes develop, their training increases in terms of its frequency, duration, intensity and the range of activities engaged in (e.g. plyometrics, weights etc).
- ◆ Most senior athletes train on six days per week and frequently more than once a day.
- ◆ Avoiding injury is seen as a major source of competitive advantage for athletes, whilst for those who do become injured proper rehabilitation provides the best conditions for avoiding drop out. Repeated injury and an inability to recover previous levels of attainment is common amongst those who drop out.
- ◆ University is seen as a mixed blessing for athletes. It can be a good environment in which to develop if the right infrastructure is in place. Equally, the lure of being away from home, often for the first time, and the social life available to students can be a significant distraction.
- ◆ High quality coaching input is widely acknowledged as being the most important external input to an athlete's development in the sport.
- ◆ Athletes and coaches report a shortage of suitably trained coaches; this can result in high coach to athlete ratios in training, which in turn leads to a sub-optimal training experience.
- ◆ Family and friends are important to the development of athletes in terms of practical support such as transport to training and events and financial help, as well as emotional support to help keep athletes focused and grounded.
- ◆ Support services, notably physiotherapy and massage, are inputs that are valued by athletes. For those outside of official support programmes, access to support services is patchy and at times expensive.
- ◆ Athletes and coaches identified three key critical success factors that drive achievement, these are: intrinsic motivation, coaching, and the support of family and friends.

This report can be seen as serving two key purposes. First it provides a retrospective justification for certain actions that have been taken in previous years, notably around the UKA Athlete Development Model. Second the evidence in this report provides a basis for more confident strategic planning in the future. England Athletics now has a much clearer research agenda in terms of what it needs to know next in order to continue developing strategies that are in the best long term interests of the sport.



1. Introduction

1.1 Focus

This report is concerned with junior talented athletes in the United Kingdom in order to inform the work of the Competition Review Group of England Athletics. England Athletics has adopted the principles outlined in the UK Athletics Athlete Development Model (UKA ADM) and now is an opportune time to assess the extent to which the methods recommended in the UKA ADM are being used in practice. To this end the focus of the research is on young talented athletes and concentrates specifically on:

- ◆ performance;
- ◆ progression;
- ◆ retention in the sport; and
- ◆ drop out from the sport.

Using the Power of Ten database, a cohort of athletes aged under 15 who were ranked in the top 20 for their event in 2005 have been monitored over the six year period 2005 to 2010 inclusive. Included in the research are 17 events for both males and females which enabled us to track the top 513 young track and field athletes. The purpose of this initial desk research was to:

- ◆ Identify those athletes who were ranked in the top 20 in their event at Under 15 level in 2005;
- ◆ Identify those athletes who were still in the event in 2010;
- ◆ Identify those athletes who are still in the sport but in different events;
- ◆ Quantify the retention and drop out rates in the various events and the sport overall;
- ◆ Measure the progress of those athletes who are still in the event; and
- ◆ Compare the performance of the best performing athletes in 2010 with the best in the world.

This initial data analysis is based on factual data that is freely available in the public domain, notably via the Power of Ten website. In order to move beyond what basic numbers can tell us, the research subsequently employed qualitative methods via interviews to expand on the findings from the Power of Ten database. We interviewed 32 athletes who are still in the sport and who have progressed; 16 athletes who were identified as being talented in 2005 but who are no longer involved in the sport; 17 senior athletes who have performed at international level; and 10 elite coaches. The purpose of this approach was to achieve a rounded view of the issues facing talented young athletes from a variety of perspectives.

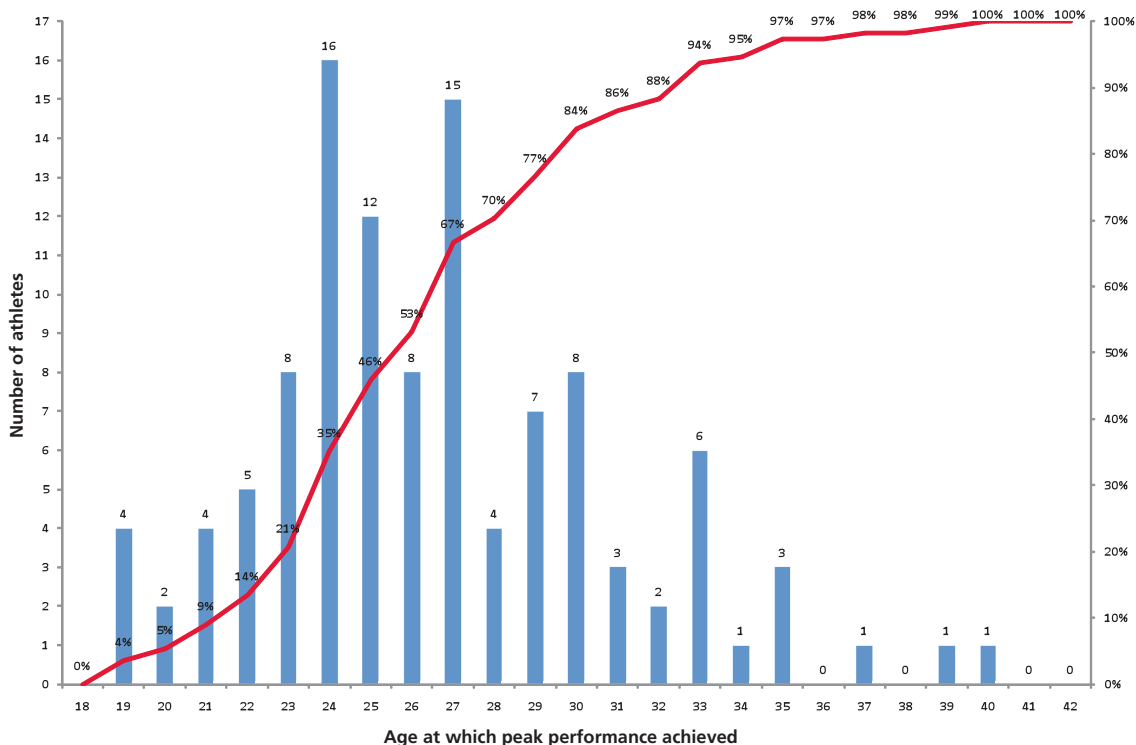
It should be noted from the outset that the approach to this research is new in the context of elite sport generally and athletics specifically. It is therefore likely that the results pose more questions than answers and both England Athletics and SIRC acknowledge this point. We agree that this piece of research is the first step on a journey to help inform the optimum way to develop and retain young elite athletes so that they are able to achieve their full athletic potential. Plans are already in places for subsequent phases of the research whereby new lines of enquiry will be followed as a result of the questions raised by this initial work. Consequently, whilst this project is pioneering in its approach, it is like all research, subject to certain caveats which will be stated clearly as and when appropriate.

Before presenting the key results of the research conducted specifically for this study, it is first worth reviewing some of the selected literature and policy documents that have helped to inform the thinking behind our work. We start with a quotation from Grund and Ritzdorf (2006), who stated "that the goal for athletes should be to achieve their peak performance in adulthood rather than adolescence". This view is entirely consistent with the principles of UKA Athlete Development Model and the England Athletics Competition Strategy Review (June 2010). To set a broad context for the study analysed the age at which UK athletes have typically achieved their peak performances historically, as developed in Section 1.2 below.

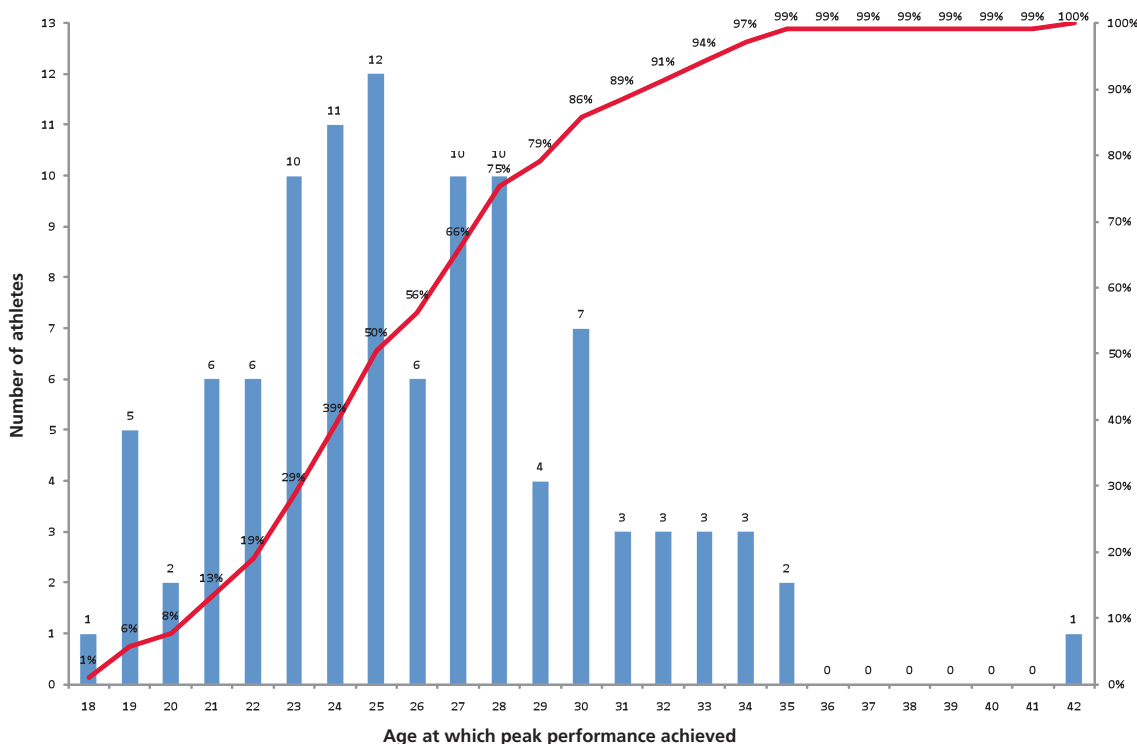
1.2 At what age do UK athletes achieve peak performance?

To test the validity of quotation from Grund and Ritzdorf above, we analysed the all time top five performers in 22 individual athletic events for men; and for women the top five performers in 21 events. These 43 events represent the current Olympic Games' programme for athletics in individual events - the results in the four relays events, which are contested by teams, are excluded. Note, our data relate to performers and not performances. For example, Linford Christie has at least the top five performances in the men's 100m, but as a performer he is counted only once in our data for the 100m. The results are shown in Graph 1 for men and Graph 2 for women.

Graph 1 - Peak performance of male athletes in the UK by age



Graph 2 - Peak performance of female athletes in the UK by age



Of the 110 all time best male performers in the UK across 22 Olympic events, only four athletes achieved a top five performance before the age of 20 (David Grindley, 400m; Steve Smith and Brendan Reilly, both High Jump; and Mark Lewis-Francis, 100m). The median age, that is the mid point of the distribution in Graph 1 occurs between the ages of 25 (46%) and 26 (53%). Furthermore, 50 of the 110 data points (45%) occur between the ages of 24 to 27 inclusive.

Of the 105 all time best female performers in the UK across 21 Olympic events eight (8%) were achieved between the ages of 18 and 20, with the youngest being Holly Bleasdale in a relatively new event for women, the Pole Vault. By the age of 25, 50% of the all time best female performers reached their peak. This means that historically the UK's female athletes have been just as likely to achieve their peak performance at the age of 26 or above as at the age of 25 or under. Between the ages of 23 to 28 there are 69 data points which is equivalent to two-thirds of the entire distribution.

These findings from both the male and female data suggest that England Athletics and UKA are right to prioritise the principles of the UKA ADM as the historical evidence shows clearly that for the vast majority of athletes, peak performance is not achieved until well into adulthood. These findings are useful evidence for:

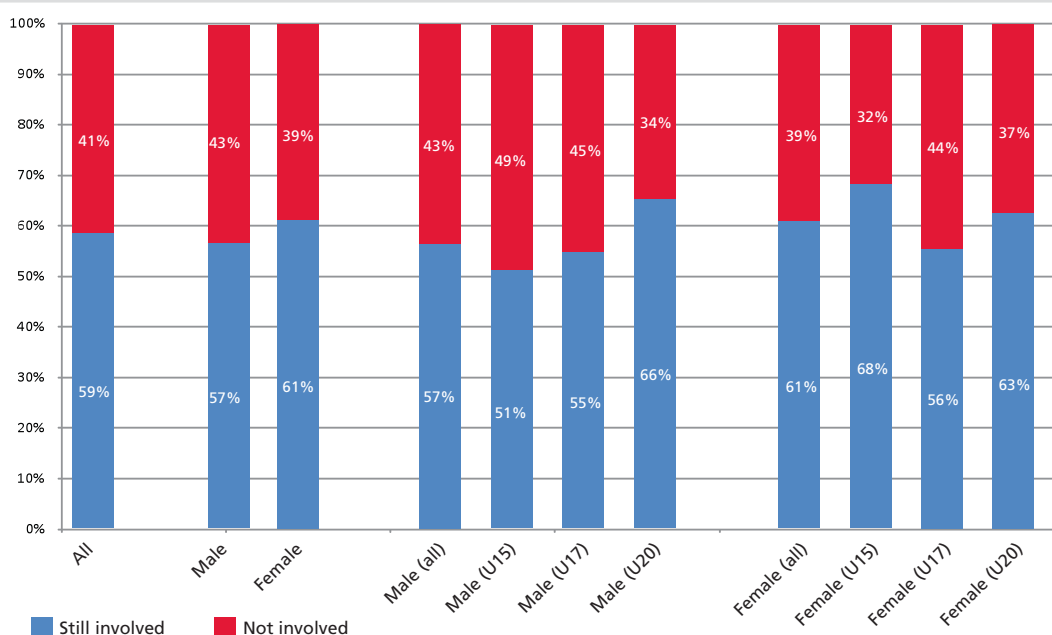
- ◆ forming strategies to retain young athletes in the sport;
- ◆ managing athletes' expectations (and those of their coaches and parents) regarding progression; and
- ◆ making informed decisions about when young athletes should specialise in groups of events or single events.

Given that the evidence shows that peak performance in the UK tends to be achieved in adulthood, it raises the question: is it better to develop all round athleticism in young athletes rather than specialising at an early age? The number of athletes who achieve success at the highest level is few and thus there is some logic in retaining as many athletes as possible within the sport and for these athletes to make meaningful and sustainable progression. In the following section we look at historical retention and drop out levels amongst talented young English athletes.

1.3 Retention rates and progression amongst young talented athletes

In the UK, the respected athlete and coach Callum Orr conducted research on the finalists at the English Schools Amateur Athletics (ESAA) championships to test for retention and drop out within the sport. The 560 athletes were tracked initially to establish the extent to which ten years on from ESAA they were still involved in the sport. The results for the sample as a whole and various cross tabulations are shown in Graph 3.

Graph 3 - Callum Orr's research into retention and drop out (1996-2006)

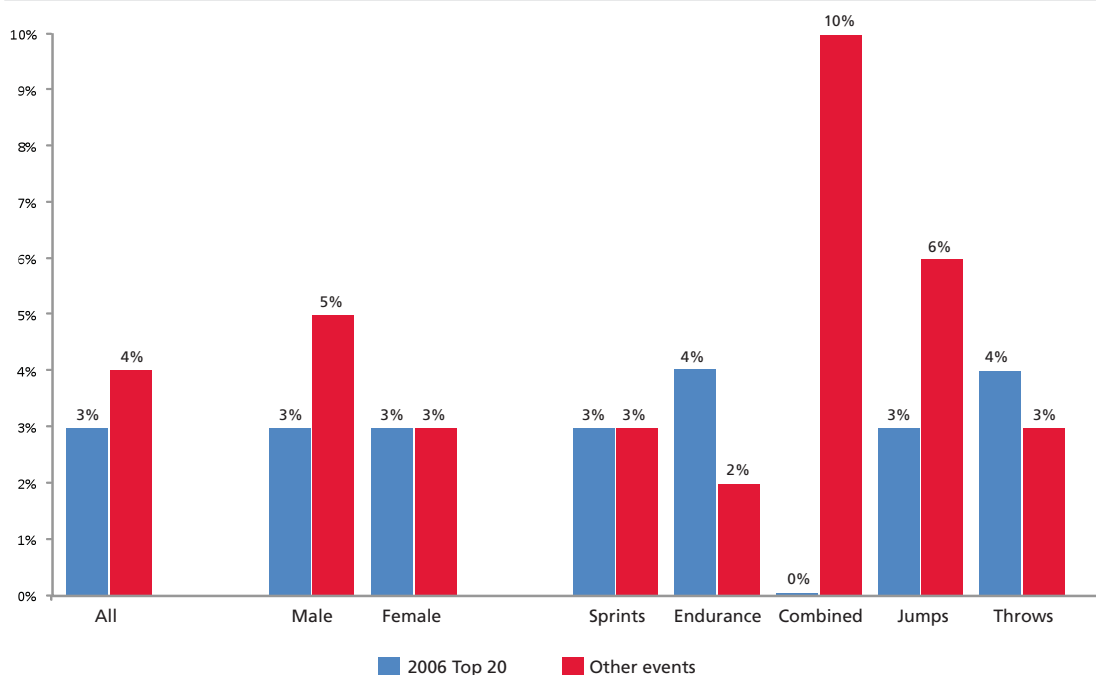


Over the ten year period reviewed by Callum Orr, 41% of 560 competitors were no longer involved in athletics when they were tracked in 2006. Girls had a higher retention rate than boys (61% v 57%) and amongst boys there was a decreasing drop out rate with age as 66% of those who were Under 20s in 1996 were still in the sport compared with 51% of Under 15s and 55% of Under 17s.

There was no discernible pattern in retention and drop out amongst girls by age. However, it is worth noting that for girls the highest level of retention was amongst those who were Under 15 in 1996 (68%) and this contrasts interestingly with boys for whom the Under 15 cohort had the lowest retention rate within the sample (51%).

Having quantified the degree of retention and drop out amongst ESAA finalists, Callum Orr conducted further time series research to establish the extent to which athletes who were ranked in the top 20 at Under 15 level were also ranked in the top 20 some ten years later. This research involved a different cohort of 560 athletes and was focused on progression rather than retention. The results of this analysis are shown in Graph 4.

Graph 4 - Callum Orr's research into athlete progression (1996-2006)



In 2006, of the cohort of 560 top Under 15 athletes in England, 17 (3%) were top 20 athletes in the same event in which they achieved a top 20 place at the 1996 baseline. In addition, a further 22 (4%) were ranked in the top 20 in a different event to the 1996 baseline. Overall then these findings equate to 7% of athletes being ranked in the top 20 for a specific event some 10 years after being ranked as a top 20 athlete at Under 15 level. The remaining 93% of athletes were either no longer in the sport, or still in the sport but at a lower level than top 20.

The best rate of progression occurs in the Combined Events category (10%). However, it is interesting to note that none of the top 20 from 1996 progressed in combined events and all 10% were ranked in the top 20 for other events. This could be due to athletes specialising in fewer events as they get older, or it could be that as there is progression from pentathlon, to octathlon to decathlon, the combined events that are competed in by adults are different to those done by young athletes and thus technically athletes are not in the same event. Nonetheless, the data shows that for this cohort, the athletes who remained in the sport at a high level for ten years were more likely to be in a different event during their adult years than they were in as talented juniors.

Linked to the data in Graphs 1 and 2, our interpretation of Graph 4 seems to represent a strong argument for focusing on the development of all round athleticism in the early years of training rather than early specialisation on a specific event or group of events. This view is entirely consistent with the principles of the UKA ADM and reinforces the importance of all round athleticism and adaptability rather than early specialisation.

1.4 Key points

Prior to presenting the results of our research into the recent performance and progression of young athletes in the UK, we present below a summary of the key points thus far.

- ◆ Athletes do not achieve their peak performance until well into adulthood on average this is around 26 for men and 25 for women.
- ◆ Previous research into young elite athletes in the UK reveals that over a ten year period 41% were no longer involved with athletics.
- ◆ In terms of athlete progression a study of 560 top 20 Under 15 athletes revealed that 10 years later 7% were still ranked in the top 20 for any event.

2. Tracking Talented Young Athletes 2005 - 2010

2.1 Our approach

Given the importance of identifying, developing and retaining athletic talent in order to ensure success in international competition, we conducted a tracking study on the retention and progress of talented young athletes. In partnership with England Athletics we agreed a list of 17 events for both males and females as shown below.

1. **Speed** (5 Events): 100m, 200m, 300m/400m and Sprint Hurdles
2. **Endurance** (3 Events) 800m, 1500m and 3000m
3. **Jumps** (4 Events) High Jump, Long Jump, Triple Jump and Pole Vault
4. **Throws** (4 Events) Shot Put, Discus, Javelin and Hammer
5. **Combined** Pentathlon (in 2005), Heptathlon/Decathlon (2010)

Using the Power of Ten database we identified the athletes whose performances ranked in the top 20 at Under 15 level in 2005. In theory this should have generated a sample of 680 athletes. However, in practice we found in numerous instances that some athletes had the same level of performance and that to include the top 20 ranks we would have to include more than 20 athletes per event. In the interests of being inclusive, all athletes whose performances ranked in the top 20 in 2005 were included and the final sample was 708.

The overall sample broken down by event, event group and gender is shown in Table 1.

Table 1 - The Nature of the Sample

	Event	Male	Female	Total
1	100m	25	23	48
2	200m	23	20	43
3	300m	12	23	35
4	400m	21	9	30
5	Hurdles	22	22	44
	Sprints	103	97	200
6	800m	21	21	42
7	1500m	21	21	42
8	3000m	21	21	42
	Distance	63	63	126
9	Long Jump	23	25	48
10	Triple Jump	22	18	40
11	High Jump	25	24	49
12	Pole Vault	22	21	43
	Jumps	92	88	180
13	Shot Put	21	21	42
14	Discus	21	21	42
15	Javelin	21	21	42
16	Hammer	21	13	34
	Throws	84	76	160
	Combined	21	21	42
	Totals	363	345	708

In addition to there sometimes being more than 20 athletes per event, there are also other apparent anomalies in the data. These are explained briefly below.

300m / 400m

At U15 level girls tend to run 300m rather than 400m. For this reason we found 23 girls with a 300m time and also 9 with a 400m time. For boys we found 12 with a 300m time and 21 with a 400m time. In the interests of being inclusive all of these athletes were tracked from 2005 to 2010. However, to be included in the 2010 data a top 20 time in the 400m had to be evident.

Triple Jump (Girls)

We found only 18 recorded performances for the girls' triple jump at U15 level. We understand that this is an event which is not encouraged at U15 level for girls, who instead tend to be directed towards the long jump first.

Hammer Throw (Girls)

We found only 13 recorded performance for the girls in the hammer throw at U15 level.

A further qualification to the data is that although we recorded 708 different performances across the 17 events it does not necessarily mean that these were achieved by 708 different athletes. It is quite possible that an athlete ranked in the top 20 for the 100m could also be ranked in the top 20 for the 200m. To separate the number of athletes (performers) from the number of performances, we reanalysed the athletes to identify duplicates in the data set as shown in Table 2.

Table 2 - Number of Athletes and Performances

No. of Events	Athletes	% of Athletes	Performances	% of Performances
1	366	71%	366	52%
2	109	21%	218	31%
3	29	6%	58	8%
4	8	2%	32	5%
5	1	<1%	5	1%
Totals	513	100%	708	100%

The 708 performances included in the research were made by 513 different or unique athletes. The majority (71%) of athletes are in the data set for one top 20 performance only, and these athletes account for 52% of the 708 performances. By way of contrast to these, the remaining 29% of the athletes are in the top 20 for more than one event and in turn account for 48% of the 708 performances.

Every athlete who was recorded in the baseline was then tracked through the Power of Ten database to 2010 in order to establish three key criteria for subsequent analysis. First, were the athletes identified in 2005 still competing in the sport of athletics six years later? The answer to this question provides an assessment to the extent to which young athletes were being retained within the system. Second, of those athletes identified as still being in the system, how many were still competing in the event in which they were a top 20 athlete at Under 15 level (and consequently how many were competing in different events)? Third, how many of the currently active athletes were still ranked in the top 20 of their sport at Under 20 level?

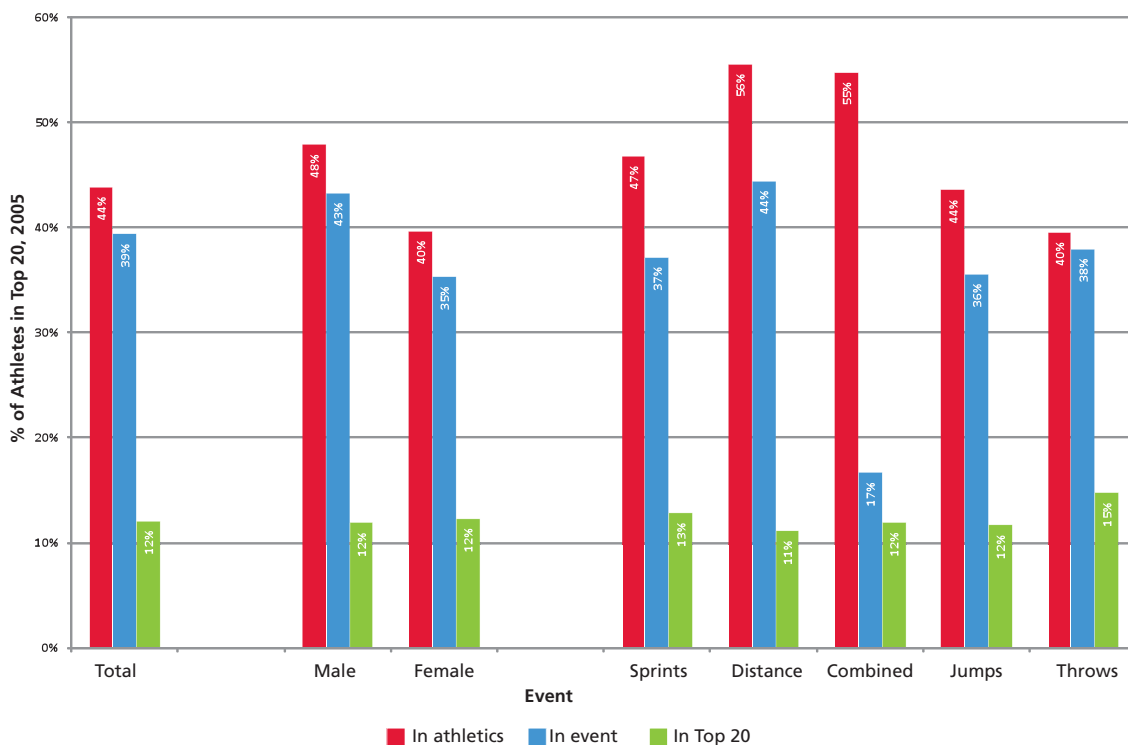
There are some caveats to this component of the research that are worth clarifying in advance of the results. First, we examined one cohort of athletes only, namely those who were in the system as Under 15s in 2005. Our findings are not necessarily generalisable to other cohorts of athletes and indeed one of our recommendations for future research is that similar analyses should be conducted with subsequent cohorts of athletes. Second, we have assumed that the Power of Ten database is both accurate and comprehensive.

It should be noted that this research is similar to that carried out by Callum Orr in his analysis of athletes between 1996 and 2006. In this regard our work is an update and a development as we also analysed athlete progression and benchmarked it against the best in the world for each year from U15 to U20. These points are developed throughout the remainder of Section 2.

2.2 Retention rates

The headline retention rates for the Under 15 cohort for 2005 along with data on those who are in the same event and those who are still ranked in the top 20 for their age group, is shown in Graph 5. The data in Graph 5 sub analysed by gender is shown in Graph 6 (males) and Graph 7 (females). Although the figures are reported in percentages in our graphs, it is easy to identify the absolute number of cases each percentage is based on by referring to Table 1 above.

Graph 5 - 2010 Retention Rate of Elite Athletes Aged Under 15 in 2005



The overall retention rate for the 2005 cohort over the six year period to 2010 was 44% and this finding compares unfavourably with Callum Orr's research in which 59% of ESAA finalists from 1996 were still involved in athletics in 2006. Although our sample and the ESAA sample are not the same, our sample shows a higher drop out rate (56% v 41%) over a shorter period of time (6 years v 10 years). A possible explanation for this difference in drop and retention lies in the nature of the two samples. Callum Orr's sample was based on the finalists of the ESAA (typically 8 athletes) whereas our sample is based on top 20. It could be argued that Callum Orr's sample typically had a higher level of achievement than our sample. If this point is accepted, it may be the case that retention is higher amongst the higher achievers relative to those who are no doubt talented (top 20), but not necessarily to the same standard as ESAA finalists (top 8).

Of the 44% of athletes who were still in the sport, 90% of these were competing in the same event as they were as a top 20 Under 15 athlete six years earlier. This finding indicates that for the vast majority of the cohort of athletes under review, specialisation must have taken place when they were Under 15 or even younger. The proportion of athletes from the top 20 in 2005 who still ranked in the top 20 at Under 20 level in 2010 was 12%, which equates to an average of two to three athletes per event.

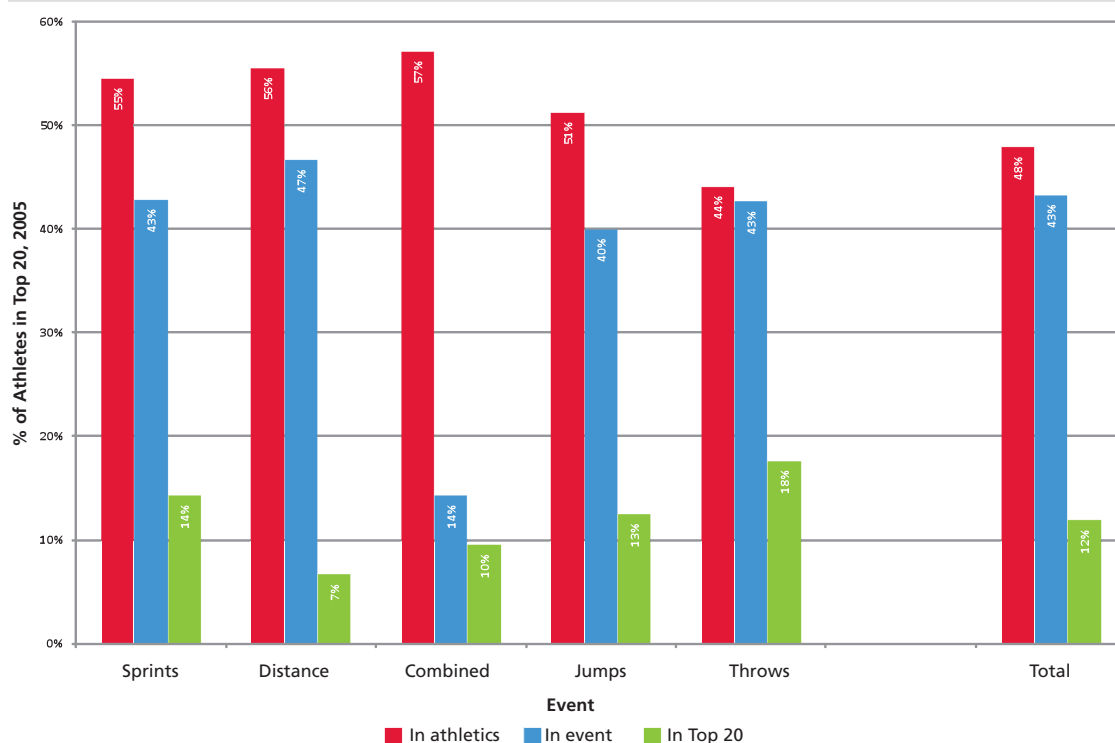
Nearly half (48%) of male athletes in the cohort were still competing in the sport, with 43% still competing in the same event. For female athletes the equivalent rates were 40% and 35% respectively. The retention rate for males and females contrasts interestingly with Callum Orr's research in which females were found to have a higher retention rate than their male counterparts (61% v 57%). The proportion of athletes who retained their status as a top 20 elite athlete was marginally, but not significantly, higher for female athletes at 12.3% than for male athletes (11.9%) - see Graphs 6 and 7.

There was considerable variation between the main event types; with distance events showing the highest retention rates (56%), followed by combined event athletes (55%).

Whilst 56% of elite distance runners in the Under 15 age group were still in the sport in 2010, a lower proportion (44%) were still competing in the same event, although this was still marginally higher than the overall average (39%). This retention rate is high despite the traditional tendency of athletes to move up in distance with age. The figure for male distance runners (47%) was higher than for female athletes (42%). The proportion of distance athletes who were still in the top 20 after 6 years was slightly lower than the average figure at 11%, though the rate for female runners (16%) was more than twice the score for males (7%). In absolute terms this equates to about 7 female distance runners and 3 male distance runners and thus the figures should be viewed as indicative and should not be generalised beyond this cohort.

The pattern of retention for combined event athletes was the only one to differ significantly from that of the sample as a whole. The overall retention rate within combined events was higher than average at 55%, but within the combined events themselves, the rate was the lowest of all the sub groups at 17%. This finding suggests that those athletes competing in combined events in 2005 who are still in the sport in 2010 have tended to specialise and focus on a narrower range of events six years later. Of those athletes still competing in combined events, 12% were still in the top 20 in 2010 compared with other event groups. However, in practice this equates to only two of the three male athletes and three out of four females and thus it would be inappropriate to draw more detailed conclusions from this data.

Graph 6 - 2010 Retention Rate of Elite Athletes Aged Under 15 in 2005 (Males)

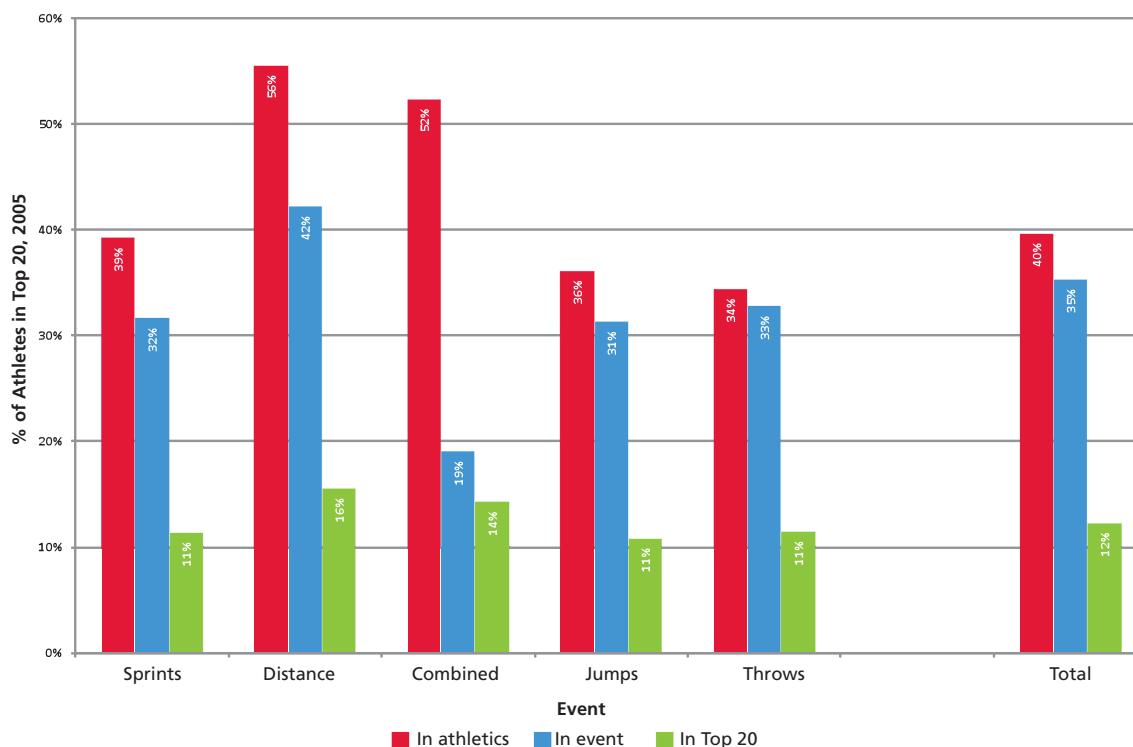


In the sprint events the overall retention rate within the group was slightly higher than the overall average at 47%, but the retention rate within specific events was much lower at 37%. In both cases the figure for male athletes was higher than for females, though this is partly explained by what appears to be a high drop out rate from the women's 300m which is a non-championship event. In practice the 300m is a stepping stone to the 400m and thus athletes have not necessarily dropped out but moved up to 400m. Any athlete who was ranked in the top 20 for either the 300m or the 400m in 2005 and who was still in the sport in 2010 is included within our data.

The retention rate for females (32%) is much closer to the overall average. The proportion of athletes still in the top 20 was higher than the overall average at 13%, with a slightly higher proportion of males than females. One reason for the variation in retention rates between the sprint and distance events may be the traditional transition route from the 400m to the 400mH and 800m events. There is some evidence from the cohort to support this view, with one male and five female athletes from 2005 moving up to 800m, and another four changing to the distance hurdles event.

For field events, the overall retention rates within the sport were just below the overall average, at 44% for jumps and 40% for throws, although the rate of retention within specific events was much closer to the average (36% for jumps and 38% for throws). The smaller gap between the two figures in both cases suggests that if field event athletes do remain in the sport, they are more likely to keep to their particular discipline, although this is complicated somewhat by the significant minority of athletes who compete in more than one throw or jump (for example long jumpers who also compete in the triple jump, and shot putters taking part in the discus).

Graph 7 - 2010 Retention Rate of Elite Athletes Aged Under 15 in 2005 (Females)



In both the jumps and the throws, the retention rates were much higher for male athletes than for females. More than half of male jumpers were still in the sport in 2010 compared with 36% of their female counterparts, while the proportion of males who were still competing in the same event was 9 percentage points higher than for females (40% compared with 31%). The proportion who maintained their position in the top 20 was higher than average for the throwing events, at 15%, though the figure was higher for male athletes (18%) than for females (12%). For the jump events, the proportion still in the top 20 was 12%, with a slightly higher figure for male athletes (13%) than for females (11%).

For all 34 events in the sample, Graph 8 shows the drop out from athletics by year. 2005 is the year in which athletes were Under 15 and 2010 is the year in which they were Under 20. The line for 'overall' (that is all 513 athletes, male and female in the sample) shows accelerating drop out from the age of Under 17.

U15 (100%)	to	U16 (93%)	equals	-7 percentage points
U16 (93%)	to	U17 (85%)	equals	-8 percentage points
U17 (85%)	to	U18 (72%)	equals	-13 percentage points
U18 (72%)	to	U19 (59%)	equals	-13 percentage points
U19 (59%)	to	U20 (44%)	equals	-15 percentage points

The drop out rate for females progressing from Under 19 to Under 20 is particularly pronounced, at -18 percentage points. Possible explanations for drop out at this particular age are made later via the qualitative research with athletes and coaches.

Graph 8 - Overall Retention Rate by Year from 2005 to 2010

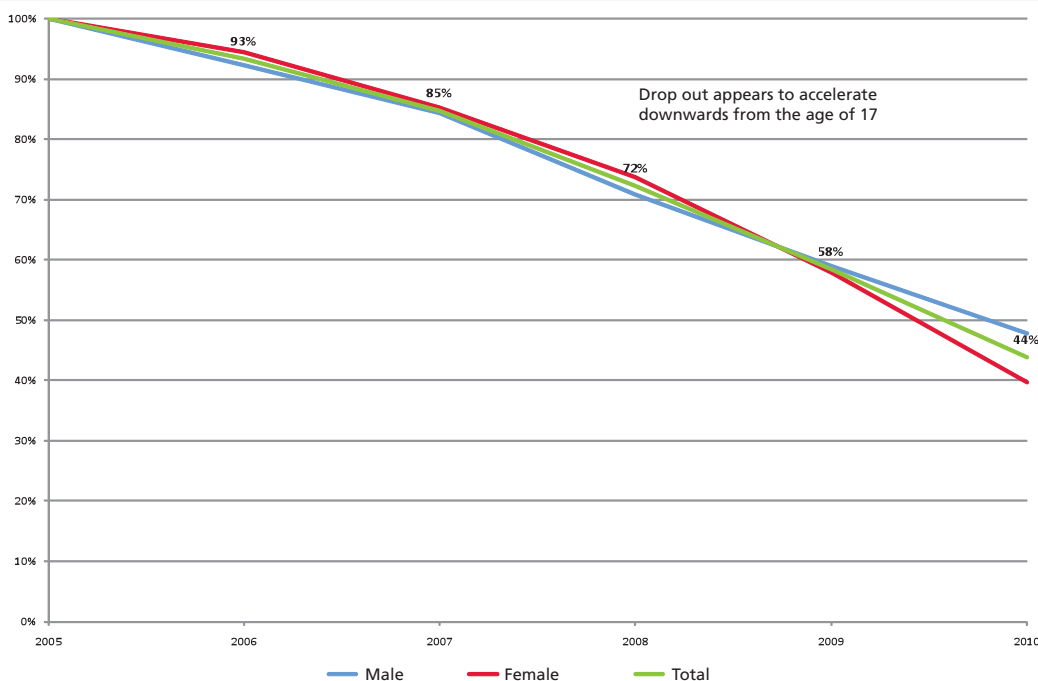
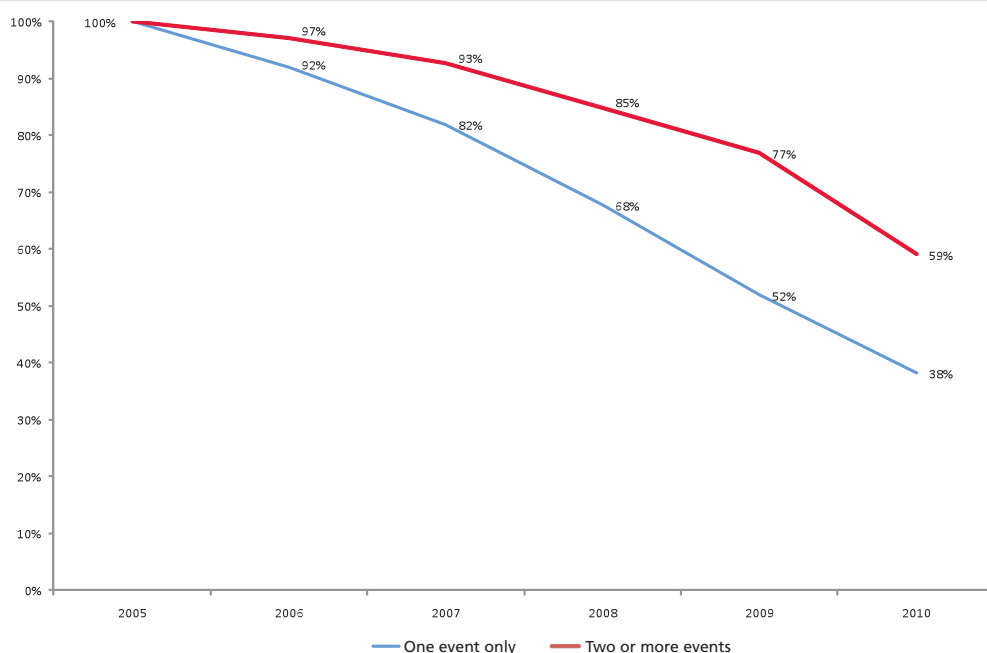


Table 3 - Overall Retention Rates by Year from 2005 to 2010

Group	Last Recorded Performance					
	2005	2006	2007	2008	2009	2010
Men	100%	92%	84%	71%	59%	48%
Women	100%	94%	85%	74%	58%	40%
All Athletes	100%	93%	85%	72%	59%	44%

Overall these findings confirm Callum Orr's research about high levels of drop out amongst young elite athletes. Furthermore, they point to what appears to have been high levels of early specialisation amongst athletes who were between six and nine years away from reaching the age at which peak performance might realistically be expected. An interesting and highly important discovery was made when we looked at the retention rates of those athletes who were ranked in the top 20 in more than one event compared with those who were ranked in multiple events. This finding for the 513 athletes in the cohort is shown in Graph 9.

Graph 9 - Overall Retention Rate by Number of Events Ranked In



Athletes with a top 20 ranking in two or more events have a significantly higher retention rate (59%) than those with a top 20 ranking in just one event (38%). This is a powerful piece of data for encouraging breadth rather than specialisation. When the data is broken down by gender the pattern is replicated as shown in Table 4 below.

Table 4 - Overall Retention Rates by Number of Events Ranked in and Gender

Gender	Events	Retention Rate					
		2005	2006	2007	2008	2009	2010
Male	1 Event	100%	91%	82%	66%	54%	42%
	2 or More Events	100%	96%	90%	82%	71%	61%
	Total	100%	92%	84%	71%	59%	48%
Female	1 Event	100%	93%	82%	69%	50%	34%
	2 or More Events	100%	98%	95%	87%	80%	53%
	Total	100%	95%	88%	78%	64%	43%
Overall	1 Event	100%	92%	82%	68%	52%	38%
	2 or More Events	100%	97%	93%	85%	77%	59%
	Total	100%	94%	87%	76%	64%	48%

We conducted additional work to establish whether athletes ranked in two or more groups of events had above average retention rates. The findings of this research proved to be interesting but inconclusive. Athletes ranked in the top 20 in two or more groups have roughly the same retention rate as those ranked in the top 20 in two or more events - whether in the same group or not. This, as we already know from Graph 9 and Table 4, is considerably higher than those ranked in just one event. However, we feel that it is a major challenge to expect athletes to achieve top 20 rankings in events in different groups. In future research, should England Athletics wish to find out whether 'run-jump-throw' is better for retention than early specialisation, then we should alter the inclusion criteria. For example, it might make sense to look at athletes who are ranked in the top 20 for their best event and then to see if they are also ranked in the top 50, or indeed top 100, in different event groups. These unplanned findings are often the pleasing by-product of experimental research of this type and help to refine future research needs.

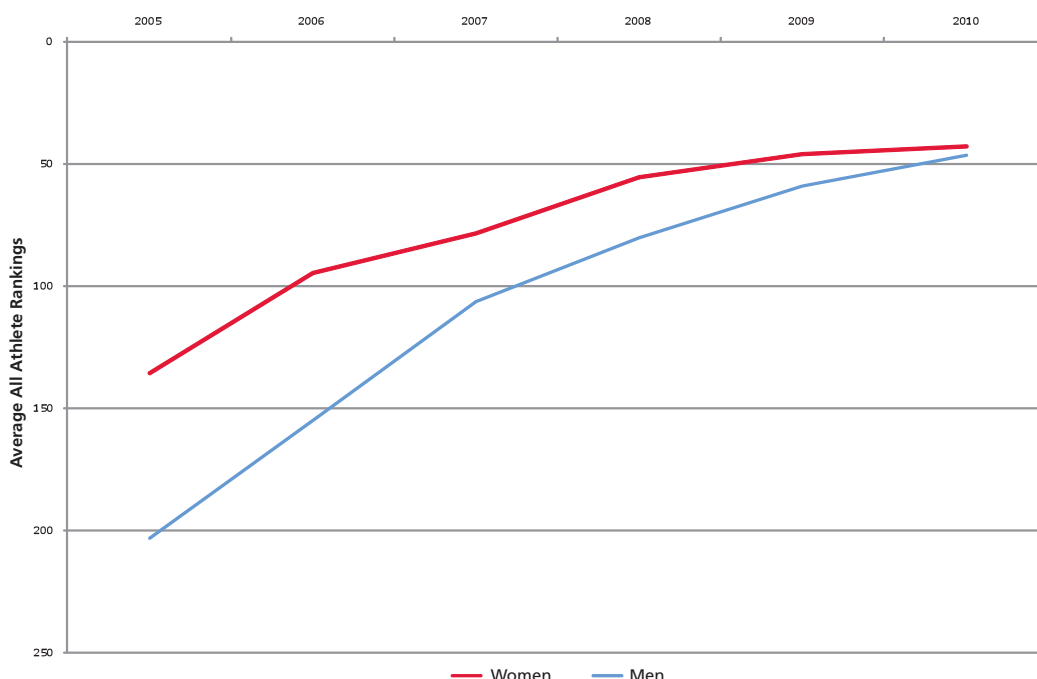
2.3 Measuring overall relative progression

The Power of 10 data base also permits an analysis of progression within an event in terms of both (relative) rankings and (absolute) performances. Athletes were selected for inclusion in this analysis if they appeared in the top 20 rankings for their age group in 2005 and 2010. Of the 513 athletes who featured in the top 20 performances across the selected events in 2005, 62 (12%) also featured in the top 20 in the same event in 2010. When measured against all athletes, the relative rankings for male and female athletes in our sample show a sharp improvement between 2005 and 2007, followed by a period of steadier progress through to 2010 as shown in Graph 10 (overleaf).

The key finding from Graph 10 seems to be that young athletes seem to experience a significant break through between the ages of 15 to 17 and that progress is more modest thereafter. This is important information for reinforcing the principles of the UKA Athlete Development Model and also for managing the expectations of athletes, coaches and parents.

It is worth noting that during the sharp improvement phase (15 to 17) male athletes started from a lower base of 203rd in the rankings and improved by nearly 100 places to 106th over the two years. By contrast female athletes who were in the top 20 at Under 15 level started from a higher base of around 136th in the rankings and improved 58 places to 78th in two years. Female athlete rankings remained ahead of their male counterparts throughout the period, though the gap between them had closed substantially by 2010. One possible explanation for this finding is that during the period under review, there was less strength in depth amongst female athletes than males such that a top 20 Under 15 girl can achieve a ranking in the top 150 overall, whereas for boys the equivalent ranking would be over 200.

Graph 10 - Relative rankings of top 20 Under 15 male and female athletes 2005-2010

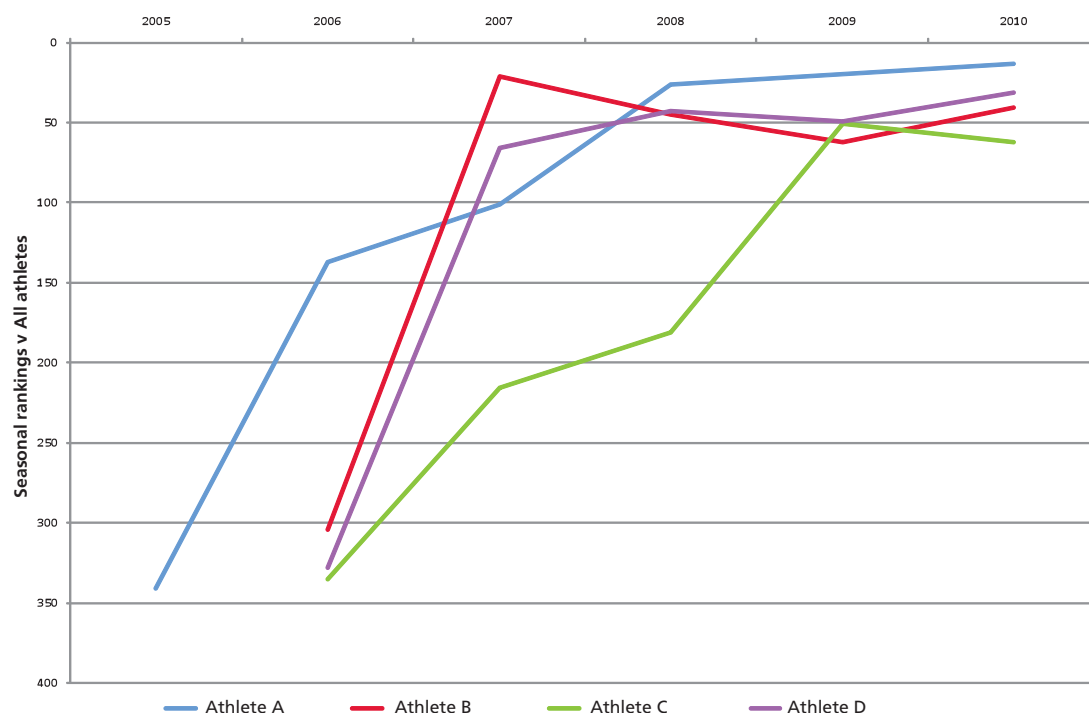


2.4 Measuring event-specific relative and absolute progression

The analysis shown in Graph 10 can easily be replicated at event level and because the unit of measurement (time or distance) is the same for each event it is possible to introduce an absolute progression analysis. To illustrate the variation in athlete progress and performance, we have taken examples from two events, the men's 100m, and the women's 1500m.

Graph 11 shows that in the men's 100m, four athletes who were in the top 20 in 2005 managed to maintain their place in the Under 20 rankings during the 2010 season. Of the four, Athlete A has made the most progress through the all-athlete rankings, moving from 341st in 2005 to 13th in 2010. None of Athlete B, Athlete C and Athlete D featured in the top 500 100m runners in 2005, but since 2006 they have progressed from between 300 and 350 in the rankings to positions around the top 50 in 2010.

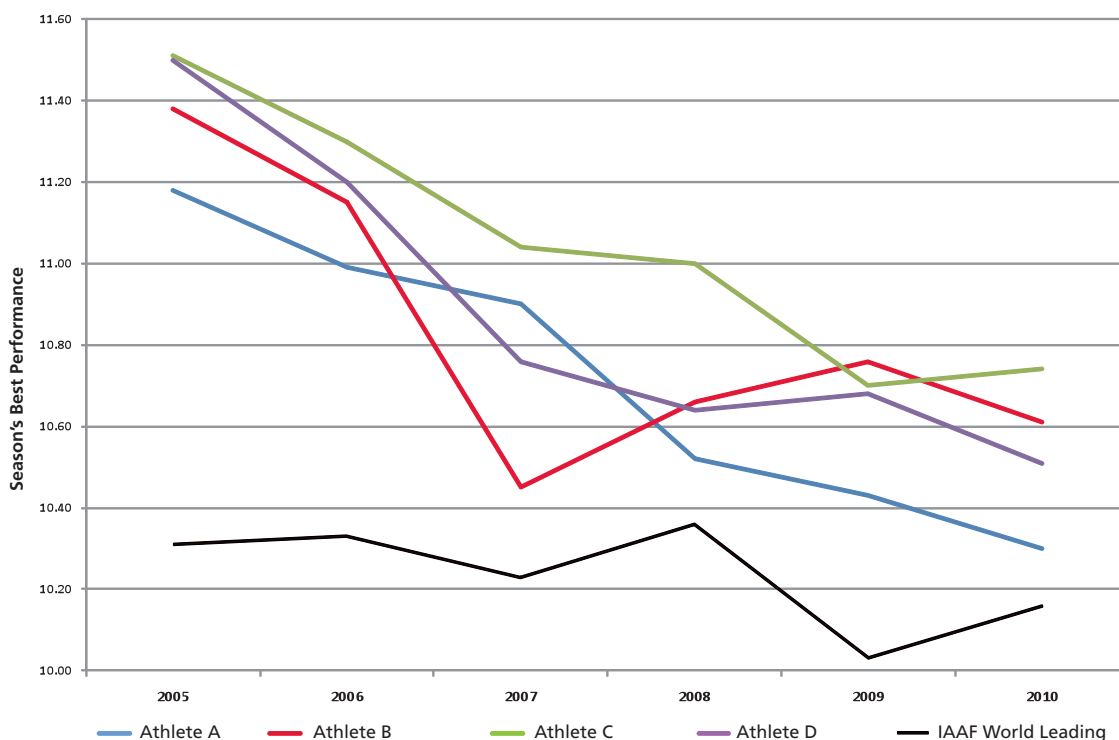
Graph 11 - Athlete progression (relative) men's 100m



In the case of two athletes, Athlete B and Athlete D, there was a period of particularly rapid improvement between 2006 and 2007. Athlete B moved up 283 places, while Athlete D progressed by 262 places, improving their personal best performances by 0.70s and 0.44s respectively. For Athlete A and Athlete C, the progression was steadier, averaging around 0.20s per season. In the case of Athlete C however, there was a slight decline of 0.04 in his season's best between 2009 and 2010, which saw his position in the rankings fall from 51st to 62nd.

When measuring absolute performance, the times of all four athletes have converged towards the IAAF world leading time for junior level of 10.16, set by Jimmy Vicaut (FRA) as shown in Graph 12. Indeed Athlete A's season's best of 10.30s was the 25th fastest time (performance) for a junior athlete in the year. What is more impressive is that as athletes can record more than one time in the IAAF list, Athlete A was actually the 9th fastest junior (performer) in the world for 2010.

Graph 12 - Athlete progression (absolute) men's 100m

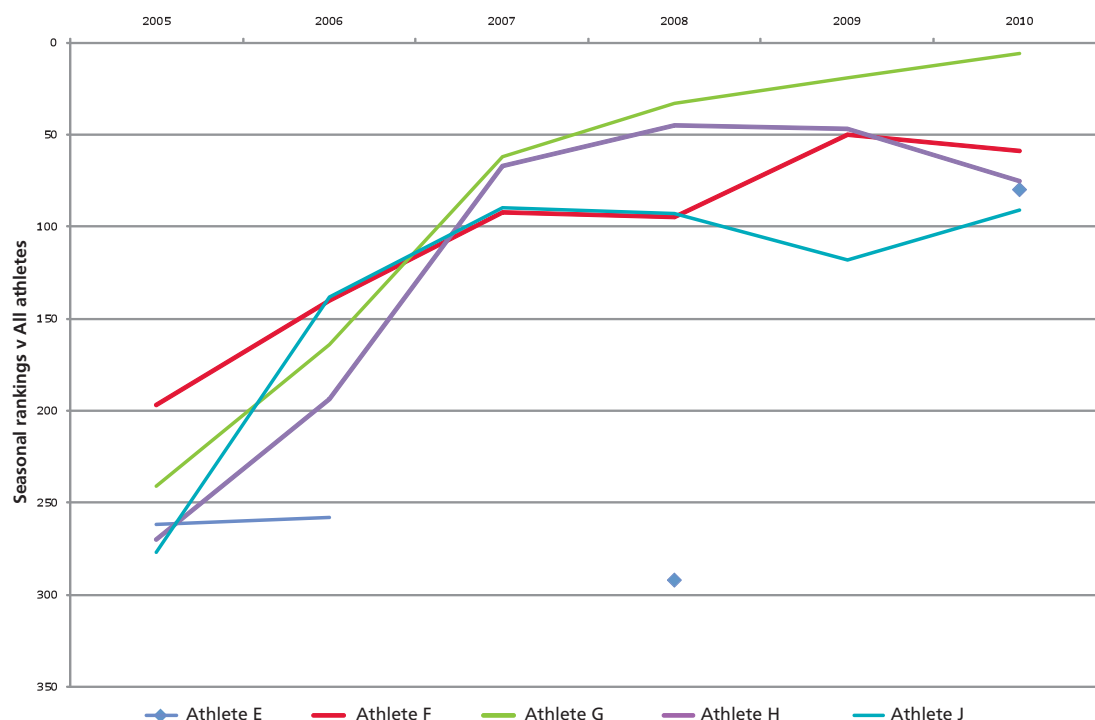


The four athletes featured in Graph 12 have differing trajectories of improvement. Athlete A is a good example of an athlete who has shown consistent year on year improvement. Athlete D and Athlete C have both improved over the period; they have also experienced a year of stagnation (Athlete D between 2008 and 2009; and Athlete C between 2009 and 2010). Athlete B by contrast showed the classic signs of improvement between Under 15 and Under 17 before two years of deterioration and then some improvement in 2009-2010. Despite Athlete B's recent improvement, his personal best was achieved three seasons ago as an Under 17 athlete.

Among junior women athletes, the 1500m gives perhaps the best illustration of athletes making progress at different rates. The clear success story in this event is Athlete G who advanced from 241st on the UK rankings in 2005 to 6th in 2010, improving her personal best by 34.40 seconds in the process. Her continuous improvement in the rankings is shown in Graph 13 (overleaf).

For the remaining four athletes in the analysis, the picture is more mixed. Athlete F, Athlete H and Athlete J showed good progress up to 2007, when all three athletes broke through into the top 100 ranked 1500m runners in the UK for the year. Subsequently however, there has been little change in their performance in either absolute or relative terms, with Athlete H and Athlete J ranked lower in 2010 than in 2007. Athlete F showed some signs of having moved onto another level by climbing to 50th in the UK rankings in 2009, but her season's best for 2010 was 2.17s slower, leading to a fall to 59th place. Athlete H's fastest time over the distance in 2010 was almost 5 seconds slower than her personal best recorded in 2009.

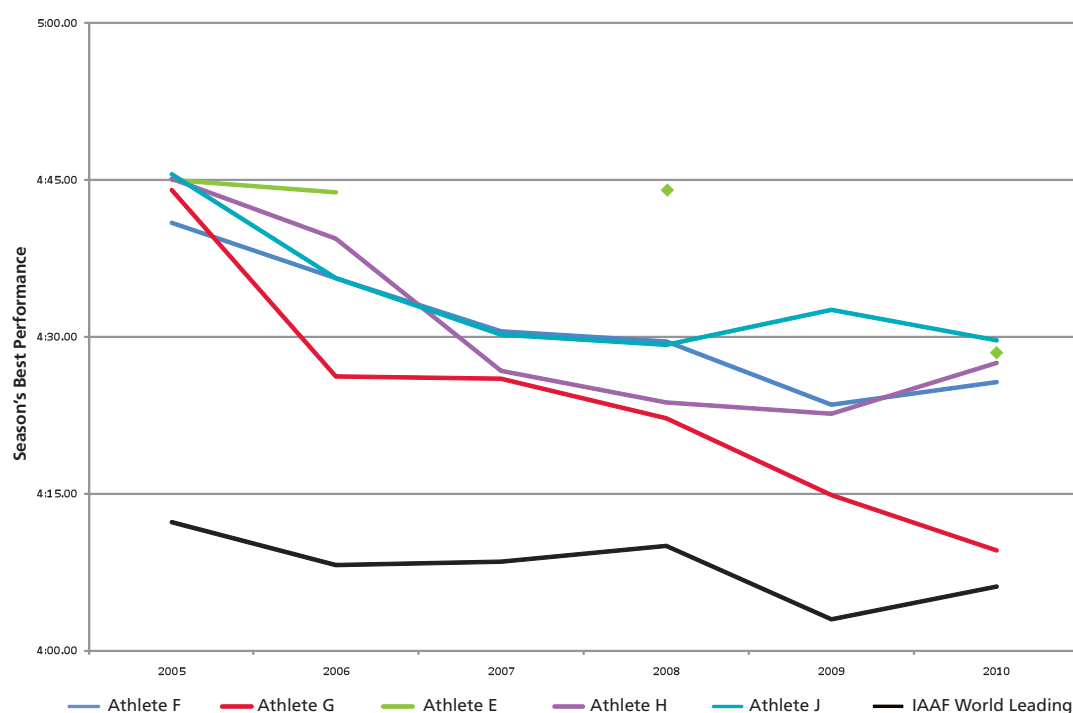
Graph 13 - Athlete progression (relative) women's 1500m



The final athlete in the analysis, Athlete E, did not register a time for the 1500m in either 2007 or 2009, but her fastest time in 2010 was a personal best, and quick enough to push her to 80th in the UK rankings. This was a significant improvement on the period between 2005 and 2008 when her seasons' bests were all within 2 seconds of her performance at Under 15 level. This may be evidence of a late developing athlete, although this will of course only be confirmed by subsequent performances.

Athlete G's seasons' bests over the last six years have consistently narrowed the gap between her and the world leading time for her age group. Her fastest time of 4:09.60 in 2010 was only 3.50s outside the world leading time of Genzebe Dibaba (ETH), making her the 9th fastest junior athlete in the world last year. This point can be seen clearly in Graph 14 where there is a strong convergence of the continually improving Athlete G and the trend line for the world's best time in her age group.

Graph 14 - Athlete progression (absolute) women's 1500m



For the other athletes in the sample, whilst there has been improvement in times since Under 15 level, three have shown a season of deterioration and one, although showing improvement, is 20 seconds off the pace of the world's best time.

Analysis of relative and absolute performance has been carried out for all seventeen events included in the research for both boys and girls. This work is in the form of an Excel spreadsheet with graphs that have been provided separately in PowerPoint. Most of the events show similar features to what has been discussed around Graphs 11-14. One further point to make is that in events that involve hurdles or throwing implements in which the height of hurdles or the weight of throwing implements varies by age category, a picture of fluctuating performance is seen as athletes get used to the additional challenges of a higher hurdle or a heavier javelin, discus or shot put. This point is well illustrated in Graph 15 for the men's shot put.

Graph 15 - Athlete progression (relative) men's shot put



In Graph 15 it can be seen that for all four athletes included in the sample there is at least one season in which their relative rankings have declined. This is not necessarily because they are deteriorating, rather it is because they are responding to the new challenge of a heavier shot and competing against rivals who may have a year's more experience than them.

2.5 Key points

- ◆ The cohort of athletes tracked from Under 15 level in 2005 to 2010 has a retention rate of 49% over the six year period. This represents a greater level of drop out over a shorter period of time than Callum Orr's research with the ESAA finalists 1996-2006.
- ◆ The vast majority (82%) of young athletes retained in the sample competed in the same events in 2010 as they did in 2005. This finding points to high levels of early specialisation six to nine years before athletes reach their most likely peak performance age.
- ◆ Of the 513 athletes who were ranked in the top 20 as Under 15s, 13% retain this status as Under 20s. This point confirms that only a minority of young athletes are able to progress to the higher levels of the sport.
- ◆ Endurance and combined events have a higher level of retention than other events. Combined events have a high retention rate within the sport but the lowest level of retention within the category, suggesting that there is a degree of specialisation to a narrower range of events in the progression to Under 20 level and above.

- ◆ Athletes ranked in the top 20 for two or more events, have a significantly higher retention rate than those ranked in the top 20 for just one event. This pattern is replicated when the data are sub analysed by gender.
- ◆ The very best junior athletes tend to show year on year improvement in both rankings (relative) and times / distances (absolute) as well as convergence towards the best performances in the world, although these instances are rare.
- ◆ Events involving hurdles or throwing implements show event-specific patterns of progression as athletes get used to higher hurdles and the heavier weights in throws.

3. Qualitative Findings

3.1 The interview schedules

In order to move beyond the analysis and interpretation of 'hard' performance statistics, we also interviewed current athletes, former athletes and current coaches to search for 'softer' meanings such as why some people progress whilst others drop out. To this end we interviewed 30 athletes from the cohort of 513 who were in the top 20 at Under 15 level now and who are still competing in the sport, these are our 'still in' sample. As a contrast to the 'still in' sample we also interviewed 16 athletes who were in the top 20 at Under 15 level but who seemed to be no longer involved in athletics, these are our 'drop outs' sample. To develop the findings from the junior athletes we also spoke with 15 senior athletes who had represented the UK in international competition, these athletes comprise our 'senior' sample. Finally we interviewed ten elite level coaches who form the 'coaches' sample. In partnership with England Athletics we devised an interview schedule. The questions and the samples to which they were posed are shown below in Table 5.

Table 5 - The four samples and the interview schedules

	Question	Still in	Drop outs	Senior	Coach
Introduction					
1. Introduction	Do you consider yourself to be a competitive athlete who is in regular training at the moment?		Y		
	What motivated you to start athletics?	Y	Y		
	What is your ambition as an athlete?	Y	Y	Y	
The Environment (training and competition)					
2. School	What events did you do at school? Have you always competed in these events?	Y			
	Did you do any other sports at school? If 'yes' which, how often and for how long?	Y			
	When did you first start to specialise in athletics in preference to other sports?	Y		Y	
	When did you first start to specialise in your event in preference to athletics generally?	Y		Y	
	Did you receive any support from your school?	Y			
	Time off for competitions/training/flexible learning/exam provision/support from PE staff, etc.	Y			
3. Club	At what age did you first start training and competing at an athletics club?	Y		Y	
	What events (100m, LJ, etc) did you compete in and how often did you compete?	Y		Y	
	What are the positive aspects of competing?	Y	Y	Y	
	Were there any negative aspects of competing?	Y	Y	Y	
The Individual (training commitment)					
4. Training	How many training sessions do you do per week?	Y		Y	
	How has this changed over the last five seasons?	Y			
	What type of training did you do in 2005? (General athletics - run, jump and throw or event specific training)?	Y			
	Do you keep a training diary? If so, how long have you kept a diary for?	Y			
	Have you ever had a period of six weeks or more off athletics due to illness or injury?	Y		Y	
	If yes when was this, for how long and how did you overcome this setback?	Y		Y	
5. Lifestyle	Do you find that as you get older there are increasing pressures on you that might interfere with your athletics?	Y	Y		
	How do you manage to prioritise your athletics over educational or training activities?	Y		Y	
	How do you manage to prioritise your athletics over other leisure activities that compete for your time?	Y		Y	
	During your career have you seen talented young athletes drop out of the sport? If Yes	Y	Y	Y	
	Why did they drop out?	Y	Y	Y	
	Why are you still here and they are not?	Y		Y	
	Do you think they had advantages or opportunities that you did not have?		Y		
6.1 College or University	Did you / do you attend college or University?	Y			
	Which one, what course and how long have you been there?	Y			
	To what extent is college / university a good place to be in to develop as an athlete?	Y			
	Is your university supportive towards the demands of your athletics career? If 'yes' how?	Y			
6.2 Employment	If you are not still in education, are you in employment? If 'yes'	Y			
	Is your job manual or office based?	Y			
	How much do you work (full time / part time; x many hours per week)?	Y			
	Is your employer supportive towards the demands of your athletics career? If 'yes' how?	Y			
Support (coaches, family, support staff)					
7. Coaches	How many coaches have you had both for general and event specific coaching?	Y			
	How important has the coaching you have received been to your development?	Y		Y	
	Do you get coaching outside of your club sessions?	Y			
	How could the coaching you receive at present be improved, if at all?	Y			
8. Family and friends	To what extent have your family and friends helped you to achieve what you have in athletics?	Y		Y	
	Can you give us an example or two?	Y			
9. Support services	Do you have access to support services such as: physiotherapy, nutrition, masseurs, sports medicine and sports psychology?	Y		Y	
	What impact do they have on you?	Y		Y	
10. Critical success factors	Can you tell us about any specific incidents that caused you to give up taking part in competitive athletics?		Y		
	What are the top three factors that have enabled you achieve what you have achieved so far in athletics?	Y		Y	Y
	How could athletics be improved so that talents like you are not lost to the sport?		Y		

The coaches' survey was conducted towards the end of the research and its purpose was to encourage a response to data that we presented to coaches, primarily from Section 2 above. For example, interviewers would show coaches an image of Graphs 1 and 2 (the age at which UK athletes have achieved peak performance) and ask for explanations as to what they thought the causes of the findings were. Thus these interviews were much more 'free flow' than for the other groups. Interviews were typically recorded onto a digital recorder and the key points were typed into Microsoft OneNote from which they were subjected to a systematic programme of content analysis.

3.2 Athletes' background information

3.2.1 Getting started in athletics

The Buckner Report paints a stark picture of the current and future challenges that athletics faces to attract and retain the next generation of participants, who in time will provide the talent pool for elite level athletics. We therefore asked our respondents how they became involved in athletics and what ambitions they have as athletes.

An overwhelming majority of respondents were encouraged by parents or teachers to join a club. By contrast only a small proportion were inspired by watching major championships on TV (5/45), with a similar number naming inspirational characters or performances by specific athletes. There is very limited evidence to support the notion of a 'demonstration' or 'trickle down' effect whereby success in international sport motivates young people to emulate successful athletes. There was some evidence of children who excelled in other sports moving into athletics, but talent identification through school age competition is still the dominant route into the sport.

It was actually in primary school. My teacher was very sports orientated really. She saw me sprinting and suggested that I go and join an athletics club. So I went and joined my local athletics club, I must have been about 8.

Male athlete, still in system

Well it was probably my parents, they are both athletes themselves and through my years growing up my mum did an athletics club at the school she taught at and I would often get off the bus there and join in a little bit. So I have been taking part and watching it from a very young age. To get to the level I have got to [sic] wasn't until I got injured playing rugby and started doing the shot.

Female athlete, still in system

I was a footballer at the time, and then I went along to a cross country meet to improve my fitness. My Dad took me along.

Male athlete, no longer in system

While one coach bemoaned the loss of traditional school club links, evidence from the athletes themselves suggests that early demonstration of ability often leads to a suggestion to join a club, normally by a PE teacher. One senior international level coach suggests that this is down to natural physical advantage rather than talent per se.

You take any class of 30 lads, and there's one with a beard at one end, and a lad at the other who looks like he's at the wrong school. So the big guy will always beat him in the throws, and maybe in the sprints or the hurdles or the high jump, because he doesn't have to jump so high. And anyway, the hurdles are so low at Under 15s, he could probably get over them without breaking stride. But eventually, the others will catch up, and then he's a problem, because he's won all these events without even trying, and he's getting overtaken by kids who used to be miles behind. A lot of those kids give up at that point because they haven't got the right work ethic instilled in them. They didn't need it to get there in the first place.

Coach

The finding that parents often introduce their children to an athletics club should not be taken as a suggestion that there is such a thing as 'natural ability' or genetic reasons that explain talent capable of performing at the highest level. If a parent is a member of an athletics club and takes their child along, it is likely that the child will be exposed to hours of deliberate practice to improve his or her skills. It is this exposure to opportunity rather than 'natural talent' that is most likely to be the cause of why some people are better

athletes than others. The key finding in this research is that whether it is by teachers or by parents, the athletes in our sample were provided with the opportunity to become young elite athletes. The challenge here for England Athletics and athletics clubs is to be proactive in the search for talent, as the evidence indicates that without pathways, talent will be lost to other sports or lost all together.

3.2.2 Athletes' ambitions

In our sample, the vast majority of athletes, 34 out of 45 athletes (76%), stated that their ambition was to take part in the Olympic Games. When other championships are mentioned (e.g. World, European, Commonwealth) these are referred to as milestones on the path to a long term goal, notably London 2012, but also Rio 2016. This point applies equally to athletes who were successful in the Delhi 2010 Commonwealth Games.

Given that the Olympic Games take place once every four years, the principles of the UKA Athlete Development Model seem particularly pertinent. Our analysis of these factors met with the approval of one senior international coach who cited long term goals and planning with an end in mind as being one of the critical success criteria for athletes who make the grade. Some athletes also mentioned specific performance targets that would confirm them as being world class performers in terms of time, distance, height or points.

Two athletes referred to the late maturation expected in their event (throws in both cases). A senior international coach also refers to this point in discussing planning the development of young athletes.

I saw a lad competing yesterday and two or three years ago he was battering everyone. He was the business, the next big thing. He was huge so a 4kg shot was like a tennis ball to him. Even a 5kg shot or perhaps 6kg, but yesterday he threw 14m or something like that, which is OK if you're doing a decathlon, but for someone who's an out and out thrower, that's crap. So you've got to ask what's going on with his training if he's not making any progression. And he'll be asking himself: 'three years ago, everybody loved me, why doesn't everybody love me any more?' If you want to turn someone into a good shot putter you have to work out where they are now, where they want to be, and what you need to do at each stage along the way to achieve that. I bet that lad's doing loads of weights, and he can probably bench press twice his own body weight, but that's not going to turn him into a good throws athlete.

Coach

Athletes' early introduction to the sport and their long term ambitions set an interesting context for a more detailed look at aspects of their environment such as training and competition and experiences from both school and club.

3.3 The environment (training and competition)

3.3.1 Early experiences

Few athletes have only ever done one event and stayed with it all the way through their career. Traditionally, runners move up in distance as they get older but there is also evidence from the interviews of athletes changing down, or switching disciplines altogether. Often, this is the result of injury, but can happen by accident, or because a team is short of a competitor.

I started out doing everything. In school I did everything because I was put in for every event. Until I was 15 I did long jump, high jump, shot put, 100, 200, 300. It wasn't until I moved to a larger club that I began to concentrate on sprinting.

Male athlete, still in system

When I was at school I mainly did discus, javelin and 100 metres as opposed to the shot put, it wasn't until I was 16 that I started doing more shot put and that was only really as a strengthening exercise as I had broken my collar bone and damaged my A-C joint on my throwing arm playing rugby. My first throw in practice I threw over the English Schools' qualifying distance, so I went to the English Schools that year and came 7th. It was almost by accident that I got into shot put, before that I was very much a sprinter / javelin thrower.

Male athlete, still in system

The general trend is for increasing specialisation with age, though the point at which this occurs varies between individuals and between events. The trigger for this may be a suggestion from a coach or teacher, sometimes in response to a change in progression rates:

I was an all round athlete and good at everything so I did javelin, shot put, high jump, sprints, and long jump. I broke the South Gloucestershire long jump record when I was younger. I enjoyed the long jump and sprints the most but I couldn't do both together. I got pains in my back so with my coach I decided to focus on sprinting.

Male athlete, still in system

When I first started at high school I did middle distance (1500m), then when I was 13 or 14, I started to go down hill, my times weren't as good, I wasn't getting any faster, I was finding it difficult in training etc. I think it was my school teacher who put me in for 200m at one of the school league matches, and I ran really well in the 200m so I decided to start training in it, and from then on I moved to sprinting. I can't remember what it was that got me started in hurdles.

Female athlete, still in system

Occasionally, there is another cause:

I reached 15, and my body shape totally changed. I became more of a short distance runner then as opposed to middle or long distance runner.

Female athlete, no longer in system

Most young athletes played other sports at school, and might be considered 'sporty types' by their peers. Boys were more likely to participate in football, rugby and basketball, and girls in hockey and netball, with a smaller number taking part in gymnastics. Of those who did participate in other sports, most started to specialise in athletics around the age of 16, which may reflect the progression from compulsory to optional PE lessons in school.

Interestingly, most coaches agreed that athletics was a good underpinning sport for other sports, rather than a gateway sport, and were fairly relaxed about young adults moving away from athletics, accepting that opportunities in other sports such as rugby and football were potentially more lucrative:

It offers the underpinning and stability that all sportsmen and women should have. It gives you the fundamental movement skills - a lot of the components of training that football and hockey players never have.

Coach

I've got an athlete who I've had since the age of 9. He's now training for the basketball team because he's 6' 7". He was never going to make it as an athlete, but he recognises that what he did in athletics has set him up better in another sport.

Coach

This recognition of the transferability of skills applied more to boys than girls, for whom similar opportunities seemed to be more limited, though bobsleigh was mentioned by three coaches as an interesting alternative route into elite sport for young female sprinters.

3.3.2 Support at school

Support from schools was extremely variable, with some athletes stating that they felt their school had little or no interest in their athletics careers, which contrasted unfavourably with the support provided by their clubs and coaches. The timing of the outdoor season was one explanation put forward by several athletes, particularly around examination time. Some were more scathing in their recollection of support from their school.

Overall my school as a whole were not supportive. They didn't want to know. I think they saw it as not being academic and not being worth anything. It was a very academic school.

Female athlete, still in system

Other athletes were given a high degree of flexibility to fit their academic studies in around training and competition:

My school was very lenient. I could submit a letter if I had an event coming up and received time off for that. [I received] A lot of support. They'd put it in the

newsletter. I was given extra days for coursework. No problems with exams.

Female athlete, still in system

Most frequently, schools allowed time off for competition, particularly if this reflected well on the school itself. Athletes who made it to the national schools championships were allowed time off, especially when long travelling distances was involved.

My school paid for me to attend the English Schools' Championships. They were lenient in year 10 and 11 especially with course work. If I was competing around the country they would extend the deadline for my coursework for a week.

Female athlete, still in system

Other schools offered full and free access to facilities for training, though in some cases this was not possible:

Technically speaking we did athletics in the summer but we had a 200m track painted on the grass on a hill. I only did a few sports days because they kept getting cancelled.

Female athlete, still in system

Among the athletes who are still competing, there was no consistent picture which emerged from the interviews, though it is interesting to note that 9 out of 15 athletes who dropped out of the sport referred to academic pressures as a reason for giving up the sport.

I found during my GCSEs it was tough to balance exams and athletics training - I think I still trained the same amount of times a week, but to save travel time I would run by myself and not with my training group, which made it less competitive. I also found it tough training 4-5 times a week competing and then playing or training for football a few times a week on top. I was told to give up football but didn't want to, as I found it more enjoyable even when you lose as opposed to losing in athletics.

Female athlete, no longer in system

3.3.3 The preferred approach

The clear preference among the elite coaches we interviewed is that to begin with athletes should engage in an array of athletic disciplines, with specialisation following at a later stage. Thus the first priority, according to one coach, is to "coach the athlete, then the body, and then the event". There was consensus among coaches and athletes that a multi-event approach to coaching athletics leads to higher retention rates, for a number of reasons. Firstly, from the coach's point of view, athletes are far more likely to develop the full range of fundamental movement skills if they do more than one event. The body is better developed, and athletes have a fuller 'athletic vocabulary'.

Secondly, encouraging the run-jump-throw approach to youth and junior athletics avoids repetition which can be detrimental not only to a young athlete's body, but also to their enthusiasm for the sport, although coaches themselves recognised that in many cases athletes took up the sport with a particular event in mind. A balance needs to be struck between the ambitions of the athletes, and the education of the body required to achieve that ambition. The coaches themselves were clear that their role was to produce better athletes, who would proceed to become better sprinters, high jumpers and shot-putters:

You've got to balance the motivation when they say 'I don't want to run hundreds because I'm a jumper'. You've got to give them a rounded education, but still pander a little bit to their interests. That's why they're there, voluntarily.

Coach

They come into the sport wanting to become a sprinter or an 800m runner, and automatically a coach says, 'let's do what an 800m runner does in training'. I've learned to do the range of distances, throws and jumps. That way you learn what you want to do properly.

Coach

Whatever event you finish up with, if you've done all these other different events, it's all helpful to your development.

Coach

Encouragingly, more than half of the successful senior athletes interviewed recognised that they had benefitted from this gradually tapering, generalised-to-specialised way of

progressing in athletics. By contrast, less than a third of the junior athletes we spoke to began their involvement with the sport in this way, and as revealed by the analysis of performance data must have specialised before the age of 15. Twice as many athletes competed in an event group such as sprints, endurance, jumps or throws. This finding confirms our interpretation of the quantitative data in Graph 6 which shows that the majority (c. 90%) of young athletes were in the same event as an Under 20 as they were as an Under 15.

3.3.4 Experience of competition

Opinions on competition are almost universally favourable. Athletes relish the opportunity to compete, but as a means of measuring progress against personal targets, particularly in relation to training goals rather than beating others per se. A good performance in competition is regarded as a reward for hard work in training. While winning events and beating other athletes was cited as a positive aspect of competition by a small number of athletes, many were keen to stress how much fun it was, and it presented them with opportunities to meet new people.

I am really competitive, so it is really good to be able to test yourself and have personal best times and so on. When you are younger you love beating people, but as you get older you realise there is more to it than that.

Male athlete, still in system

The challenge of it really and coming out on top in competitions. When you get a good result the feeling is quite good. Sometimes you need competition to have something to work towards away from training.

Male athlete, still in system

Competition provides a goal for athletes and their coaches to aim for. After all, athletes "don't train to do more training, they train to compete" (Male athlete, no longer in system). In the vast majority of cases, this will not ultimately result in competing at the Olympics or World Championships. With this point made, it is perhaps significant that athletes who were successful in the Commonwealth Games in Delhi felt that they had tangible proof of progress which they could share with their support network:

It was great to be able to go back to them after Delhi and show them the gold medal, and say 'look, your sponsorship has helped me to achieve this'.

Successful female athlete

Success in competition was felt to be something to be enjoyed, but athletes who are still competing were well aware of the pitfalls of enjoying too much success early in their careers:

Some of the Under 15s were miles ahead of me, and all of a sudden they were miles behind me. I think you see it more with young male athletes who develop early, then as others catch up, they lose patience.

Male athlete, still in system

Other negative aspects of competition included travelling and being away from home, particularly for talented athletes in remote areas of the country, who are required to travel long distances to attend major meetings. Further negative aspects of competition were the demoralising effect of under-performance, or being coerced to take part in an unfamiliar event to win points for a club. Successful senior athletes were more prone to this feeling of disappointment after a poor competitive result, perhaps because they have more experience of the euphoria of performing well:

When you do compete you want to do really well. When you don't it is really difficult. The nerves and pressures are difficult.

Successful female athlete

When you get a bad day, it brings you down. 'Why did I bother training?' But next time you might have an amazing race. You can't take the highs if you can't take the lows as well. Travelling is an issue. Most of the competitions are in places like Birmingham. You have to stay overnight to compete, so it can be quite expensive and time consuming. I had to do unfamiliar events when I started. Javelin, such as Shot Put, and Discus, just to get a couple of points. I wasn't any good and I was coming last.

Male athlete, still in system

Conversely, pressure to perform generated by other people's expectations can act as motivation for some athletes.

There can be more pressure at the higher level especially at international competitions and when you have to travel. I always seem to do better in competitions. There can be more pressure at the international competitions when you need to qualify. But I like the pressure.

Male athlete, still in system

I quite enjoy being under pressure and delivering.

Male athlete, no longer in system

Coaches are more reserved in their praise for competition, with particular concern being expressed regarding the entry of Under 17 athletes into senior competition. This is especially pertinent given the recent discussions regarding Jodie Williams' participation in the 2011 European Indoor Athletics Championships. At the point where athletes become eligible to compete at senior level, they may come under pressure from team managers to compete at more than one level of competition. This approach may be beneficial to athletics clubs in the short term, but it could be harmful to an athlete's long term development if they are exposed to a level of competition in which they may perform poorly relative to other participants and become demoralised, injured or burnt out.

For junior athletes, coaches were of the view that it was important to retain a sense of fun and enjoyment, and there were some suggestions forthcoming as to how this could be achieved, including more frequent staging of relays and shorter competition schedules lasting 2 or 3 hours instead of 5 or 6. This type of thinking is the logic which underpins formats such as: Sportshall, QuadKids, and Schools Super 8. Conversely, there was also a feeling that opportunities were being missed to expose talented junior athletes to non-championship events, such as grand prix meetings and internationals. There was recognition that opportunities for athletes to represent their country were limited to major championships and age-group events, and that for some this in itself took away the incentive to commit to training.

The other thing that we miss is the odd international. A few years ago when we worked with UKA we initiated an indoor international with other athletes of the different age groups. We used to have a lot of internationals, but we don't anymore because there's no money in them.

Coach

We had Under 23s and seniors in this international. Under 20 and Under 18. What you're looking at is giving people who are in that bracket an opportunity. I'd be very interested to see the figures for the numbers of people who drop out between the ages of 20 and 23.

Coach

There is awareness of new approaches to the ethos and format of competition formats. However, coaches expressed the view that it is too early to tell whether or not new competition structures will have a lasting positive effect on retention rates and performance standards.

These things are still in their infancy. You've got to wait 3 or 4 years to see what they spin off. We're still in a waiting game. We'll not see the spin off from that for another 5 years maybe. It's maybe a bit premature [to comment on their effectiveness]. They are good aids and they address a lot of the issues that we're facing. How successful they will be, only time will tell.

Coach

3.4 The individual (training commitment)

3.4.1 Training

The conventional pattern appears to be that successful athletes train six days a week, often more than once a day. This finding is particularly the case for the successful seniors, who have on average one day of complete rest from training. As athletes have progressed since 2005, they have tended to increase the amount of training in a number of ways. The number of sessions themselves has gone up from an average of 2 or 3 per week, while the

intensity has also increased, with longer sessions, or harder 'reps'.

At the beginning I'd train whenever there was an event on. Then it grew to winter and summer training, then training abroad, so it's gone up progressively. I do weights 4 times a week. So five track sessions and four weight sessions.

Male athlete, still in system

Some athletes mentioned the need to balance and vary training in order to maintain interest, though this is less of an issue for the multi-eventers, as they are shifting focus daily, to refine techniques across the range of events. At the same time, training for other sports tends to fall as specialisation in athletics increases.

When I didn't specialise in athletics, I was training for rugby, hockey, boxing, martial arts, swimming and dancing, so my training intensity has always been fairly high. However my training programmes in athletics have become much more defined since I specialised in pole vault.

Male athlete, still in system

Most of the younger athletes interviewed recognised the need to undertake a range of training units, with different training types, including strength and conditioning, weight training, plyometrics and core stability work. However, from the athletes' perspective few if any (with the exception of combined event athletes) reported that they were following a multi-event programme per se. Rather, they agreed that a range of training types was necessary to support their development in a chosen specialised event.

I can do up to 11 sessions a week. We do 2 technical sessions, 2 weight sessions, 2 gymnastic related sessions a week, 2 running sessions a week, 1 easy, 1 hard, and 1 rehab session a week. In the winter we do a swim as a recovery session, and sort of cross country but just a longer session really. It's progressed in intensity, volume and the length of the sessions. [In 2005] I don't think I did a lot. Maybe I trained 3 times a week. In a group of about 6 of us with my Dad. It was much easier. More light hearted. Nothing mattered too much.

Female athlete, still in system

Successful senior athletes were equally able to identify the need for the range of training types:

It's changed now, because I'm a lot better than I was before. 8 (training sessions) per week. There's a variety there. Track work, hill work, gym work, and plyometrics. You have to build all the blocks. You can't leave anything out.

Successful male athlete

From the perspective of the elite coaches, the multi-event approach was clearly and explicitly identified as the favoured way to deliver quality athletic training. All agreed that there were benefits not only in terms of physical development, but also in retaining athletes in the sport. This was related to (among other things): a reduced likelihood of injury due to a broader and more refined range of movement skills and core stability; increased opportunities for transfer between events or the adoption of new events; a greater emphasis on fun and participation as opposed to competition; and an opportunity to instil the athletics culture of participation to support the club ethic.

With the grown-up athletes, all I do is make them better athletes. Not better jumpers. It's by default that they become better jumpers. The best way of doing that is by looking at the fundamental movement skills. But we do it in a fun way.

Coach

Injuries are recognised by athletes and coaches alike as an occupational hazard, but there is evidence that athletes are responding to injury setbacks in the right way. Athletes who had suffered an injury which had kept them out of the sport for six weeks or more cited recovery and rehabilitation as the means by which they overcame the obstacle. There are two issues generated by serious and repeated injury which merit some further discussion. Firstly, coming back from injury requires an athlete to devote time and energy to recovery, rather than to honing technique or improving stamina. One coach pointed out that this often led to athletes over doing their training workload in order to return to where they felt they had been, which made them more vulnerable to further and more serious injury. Avoiding this mistake requires considerable discipline on the part of the athlete, and care on the part of the coach.

Secondly, evidence from the interviews with successful senior athletes suggests that staying injury free is a significant competitive advantage, and coaches linked this to the development of core strength and fundamental movement skills as described earlier. Athletes set great store by the work of physiotherapists and masseurs in helping to prevent injury. However, access to these support services is variable, and dependent in many cases on funding (either through UK Sport, national governing bodies, or university scholarship schemes). Access to funding is itself dependent on demonstrable performance, and this favours athletes who have already achieved performance standards:

There's more chance of longevity in the sport if you develop steadily over time, rather than making sudden leaps forward, but there's not the same level of support for people who are doing it that way. They're doing it despite the system rather than because of it.

Coach

Maintaining the appropriate physical condition for competition can bring with it a particular type of social pressure. Two international coaches referred specifically and independently to the issue of body image forcing young female athletes to leave the sport in general, and throwing events in particular. It was reported that some girls try to avoid putting on weight and muscle bulk as they do not want to become 'big'.

*One reason athletes aren't being retained is because of body image and eating disorder issues that I never knew existed. 'What do you mean you throw your food up?' As a man from a certain cultural background, that's all alien to me. I never thought of myself as tall and skinny. Whereas other people focus on the body. Like Denise Lewis' six-pack, which became more of an issue because of the kit she wore. And it's all bullsh*t. Totally irrelevant to whether someone's a good athlete or not. David Hemery and Mary Rand had a six pack, but you never saw it.*

Coach

Pressure is equally likely to come from female peers as from boyfriends, although one distance coach was clear about where the blame lay:

It's lads. They don't like having a girlfriend who's a quicker runner than they are, or fitter than them.

Coach

3.4.2 Lifestyle, education and employment

Given the age of the athletes in the study, it is perhaps unsurprising that academic commitments, either at school or university, were a common source of pressure on athletes' careers. As discussed previously, relatively few discussed competitive pressure. This academic pressure is something of a paradox, since the flexibility of the student lifestyle is considered to be supportive to training programmes in many cases. Ideally, it allows athletes to balance the demands of training and competition with the pursuit of a career outside athletics.

It's [i.e. university] got its goods and bads. The facilities are good. We've got access to good facilities on campus. University itself is a bit of a challenge. First time away from home and all that.

Male athlete, still in system

Athletics is what I do, it's my priority over everything else so it's quite simple...everything else takes a back seat for my athletics and I look at ways to achieve these things around my training.

Female athlete, still in system

This is not always easy however:

Uni lifestyle is all around you so it's hard to stay focussed. I never compete well when I've got exams on.

Male athlete, still in system

When they start uni some people are drawn to the social side of it. They don't want to train or commit to it as much.

Male athlete, still in system

I guess my lifestyle changed a little bit. I didn't take sport so seriously when I went to university.

Male athlete, no longer in system

Some athletes feel that they are faced with a straight choice:

I'm at Oxford, so basically it was a choice between academics and athletics, and academics took over when the [local] stadium was closed. It kind of made my choice for me.

Female athlete, no longer in system

I've seen a lot drop out because of injury. I have seen a lot drop out because of exams. ... exams sometimes clash with competitions. There's no way I'd train all winter and summer, then when the chance to compete actually comes turn around have to say no because of exams.

Male athlete, still in system

The skill of balancing multiple demands depends on an individual's ability to keep long term aims and objectives in sight. The responsibility for this often falls on coaches and parents, but athletes were keen to point to the support of understanding friends, who refrain from pressurising them to become involved in socialising which is incompatible with a successful training regime. There was broad agreement that some drop outs are caused by an inability to prioritise athletics ahead of the attractions of a 'social life'. For many athletes, the camaraderie afforded by training and competing in groups takes the place of any social life.

I don't drink. I very rarely go out with friends because they're going out until 2 in the morning. So the best thing for me is seeing my friends in the day when I'm not training. Have an early night, and avoid socialising.

Successful male athlete

The friends I've maintained have never put pressure on me to go out. You have to make a choice as to what crowd you're going to be in with. Fortunately the friends I keep close to me now have always been supportive and backed me in what I'm doing.

Successful Female athlete

Everyone goes out once or twice a week, and I sometimes get dragged along, but I just make sure I don't go too mad.

Male athlete, still in system

With one or two exceptions, universities were thought of as being supportive towards athletes, with numerous examples of flexible learning arrangements. These included the opportunity to reschedule lectures (and in some cases, examinations), access to support services, and for particularly talented athletes, funding in the form of scholarships and bursaries. Provision of support is not universal however, and there was a marked difference between athletes who had free access to physiotherapy, and those who had to make a financial contribution to any treatment they required.

They started some support, but this has been withdrawn, but only for athletics for some reason. I have to pay for that. So physio would cost me £40 per session.

Male athlete, still in system

Some coaches were wary of athletes moving up to university for other reasons:

I always used to be happy if an athlete was still competing in sixth form, then I revised that to upper 6th, then 1st year at uni, then 2nd year at uni. My experience is that they either, train like mad and overcook it, because they haven't got the support around them, then when they get hurt, they don't know where to go; or, they go and party. Or there's no coaching opportunity. They've moved away from their home coach. The uni may not have an athletics set up. There are a lot of environmental reasons that impinge on that. Then the other one is the classic. They've done 6 or 7 years and they've had enough. They discover other stuff and they move on.

Coach

For athletes in employment, the main pressure lay in finding the type of work which could accommodate a daily training schedule. Committed athletes find a way of making work fit

around training, often with the support of sympathetic employers. The demands of training in terms of time restrict the type of employment opportunities available to successful athletes however, which can lead to deterioration in performance.

I also work part time in security at the campus - monitoring cameras and stuff so part time casual work. Last year I was working quite a lot. About 35-40 hours a week and I was trying to train full time so I found it difficult.

Successful male athlete

I work full time but my employer's reasonably flexible, in terms of working when I want, as long as I fit in my hours. It's difficult to fit it all in. You just have to make sure you're organised. It tends to work OK.

Successful female athlete

Successful athletes who are in employment often work in the sport and leisure industry as coaches, trainers or in other supporting roles. One senior athlete who works in sports rehabilitation highlighted the 18 hour days generated by working and training as being one reason why her progress may have been held back over recent years. Professional opportunities within the sport are few and far between, and National Lottery funding is seen as something of a 'holy grail'. A successful sprinter stated that he had been able to reduce his working hours thanks to Lottery funding. One distance coach drew attention to the fact that athletes who attain Lottery funded status in effect win twice

If you get to the level of the funding ladder it opens up all the other avenues of free massage, free physio, free psycho-behaviour and free biomechanics. And they don't have to work to pay for it, so they're in better shape in the first place.

Coach

3.5 Support (coaches, family, support staff)

3.5.1 Coaches

The role of the coach is vital in the long term development of young athletes. UK Sport's series of elite athlete surveys (1999, 2004, 2007 and 2009) consistently demonstrate that athletes themselves regard access to high quality coaching as being the key external input to their success. There was almost unanimous agreement among all athletes that without the right coaching, success would be impossible. The key point here is that only coaching of the right kind will work. It was harder for athletes to define what this constituted, but they were able to articulate clearly the negative effects of the wrong kind of coaching, as were the coaches themselves. Examples included sessions which tried to involve too many athletes, antiquated coaching methods and styles (including athletes being 'bawled out' for poor performance) and coaches who push too hard for success at an early stage in athlete's development.

Finding the right coach, that's the be all and end all. If they don't, they can get disillusioned very quickly by the wrong attitude, wrong training, everything. There are some coaches around who con the best athletes by saying I can get you to do this, and within two years they're finished because they've pushed them too hard. They don't think about the athlete. It's all about them.

Coach

The relationship between the coach and the athlete is paramount and evolves over time as athletes mature and become more aware of their own development. In the early stages the relationship is one of teacher-pupil as fundamental skills are taught. This then evolves into coach-athlete as athletes develop physically and begin to specialise. Ultimately, as the athlete experiences success, the coach's role becomes one of mentor and finally colleague.

You can't work to your own agenda; you have to work to the athlete's agenda. If all the athlete wants to do is come down, have a jump, have some fun, meet their mates, they may be the most talented athlete in the universe, but if they don't want to do it, you can't make them, and the minute you try and make them, they will give up and go and do something else. So you have to work with them, and sometimes you can bring them round. If you can't you just have to accept that they're not going to do what you'd like them to do and you just have to be a frustrated coach with a happy athlete. It's better to be a frustrated coach with a happy athlete, than a happy

coach with a frustrated athlete, because a frustrated athlete will not carry on in the sport.

Coach

The essential point to bear in mind is that an athlete's needs should come first, even if this causes frustration for the coach, or conflict with competition managers who want athletes to fill slots in teams. Some coaches felt there were too many competitions for young athletes, and that too much emphasis was placed on performance in those competitions, with Lottery funding often dependent on results at junior level, rather than the potential to develop and blossom at senior level. If this summary of the situation is correct in some instances, then clearly it is at odds with the principles of the UKA Athlete Development Model.

Three coaches referred specifically to the age groupings at junior level, and suggested independently that for Under 17s, the priority ought to be for them to continue to compete against their peers. Conversely, a jumps coach took a more inclusive view:

They need to be exposed to good practice, and see the good athletes up close.

Coach

There is clearly a fine balance between giving athletes opportunities to test themselves, and over-exposing them at a crucial stage in their development, but the coaches felt that it was their role to make that judgement. There is a role here too for competition organisers in finding places for promising athletes at meetings of a suitable standard.

Two weeks ago one of my athletes got an invite to Glasgow, because Philips Idowu and Larry Achike didn't want to go. And the people he was in with were all of the same standard, and credit to him he went and did really well. We've been asking the people in charge for years if we can get another one in here or there, and the answer's always 'no', because they're not deemed to be of the right standard. They don't put bums on seats.

Coach

It's development too. Last year Ade Babatunde got into the Gateshead Grand Prix because someone dropped out, and he was there, he lives on site, so they stuck him in and the boy did a PB. It helped his development. He was prepared to get hammered though.

Coach

All athletes recognise the importance of the role of coaches, but there was reluctance on the part of younger athletes to suggest improvements to their coaching. Proposals were limited to practical ways in which one-to-one access to coaches and coaching might be increased. With some athletes having to travel significant distances on a weekly basis to get to coaching sessions, it is unsurprising that these athletes wanted their coaches closer to hand.

In one extreme case, a female distance runner's coach was available remotely (via the telephone) on a day to basis, with regular, if infrequent face to face contact. A female pole vaulter referred to her need to travel over 100 miles three times a week to join up with her training group, leaving her exhausted. In this context, it is perhaps significant that two coaches raised the issue of coaching centres being centralised at Lee Valley and Loughborough, with the potential loss of links to centres such as Sheffield, Gateshead and Birmingham.

Another distance runner raised the issue of funding for coaches, but not in relation to direct payment for his services. Her issue was that the coach did not receive funding to travel with his athletes to competitions, so while he was able to support her in qualifying for major events and invitational competitions, he had to be selective about which ones he attended with her. The coach was therefore absent on occasions when the athlete most needed his input.

It is not just access to coaching sessions themselves, but access to coaching within sessions which some athletes stated could be improved.

If they go down to a club and there's a big group, and it's like a classroom situation, they're not getting that quality of contact that you get with a personal coach - and that has a big impact on them.

Coach

Coaches themselves recognise this weakness in provision and all agreed that there were "not enough coaches, and not enough coaches of the appropriate standard" (jumps coach). One solution to the problem was highlighted by two jumps coaches, who referred to coach mentoring in the case of a female athlete just beginning to break through to international level.

He [the coach] said to us that when he's at his club he's in his comfort zone, but here [at EIS] he's out of that comfort zone, so with our support, he can step up, and reflect back on that with the athlete. Because we think it's really important that we keep him one step ahead of the athlete. She's successful because of his input over the last 7 years. The last thing we want is for her to break and look for something else because she feels there's something better out there, whereas in actual fact we feel that she'd be better served by sticking with him, while we pull him through, and as a result we'd have a better coach, who can do the same for the next generation.

Coach

This approach results in mutual benefit with athletes receiving the coaching that they need, while the coaching workforce has its skills enhanced. In terms of increasing the overall size of the coaching workforce, one head coach had a very clear idea of how this could be achieved, while at the same time resolving an issue which continues to dog the sport.

Pushy parents are a massive problem, but they're also a massive source of support. They don't realise how they can help. I ask them when they're going to do their coaching badges. They laugh and I tell them, 'you sit here for hours watching your son'. You've learned all about the event. Then they say they're too tired. I say 'it'll invigorate you, that motion creates emotion'.

Coach

Coaches and young athletes were also quick to cite examples of bad practice, with several athletes who had dropped out of the sport suggesting that in their case being pushed too hard was the main reason for leaving the sport. One international multi-events coach recalled that the coaching he received as a competitive athlete never changed from year to year, and as a result his own performance reached a plateau and then stalled. A parent of a dropped out distance runner neatly summed up the effects of poor coaching on her son.

What the coach basically did was he played the athletes off against each other, and he played parents off against each other too, despite the parents trying to stay out of that. And he was responsible for other athletes leaving the sport as a result. It was not necessarily the physical training that was wrong. It was almost certainly the negativity that caused the crisis in confidence. And that was fundamentally wrong. And if it's not handled correctly, that emotional resilience and emotional intelligence is probably more important than the physical side of things.

Parent of male athlete, no longer in the system

One solution to athletes being pushed too hard for the apparent benefit of the coach was proposed by a senior sprint coach: "What it should be about is doing a range of events, relaxing and enjoying athletics." This quote is a consistent message that runs throughout the report and fits well with the national governing body endorsed products on offer to attract and retain young people in athletics such as: Sportshall, QuadKids, Schools Super 8, and Athletics 365. A more radical solution was proposed by another coach:

We need more general coaches like they have in Germany, Russia, Poland, who understand movements. They coach movements, we coach muscles here. It means we end with poor coaches. The movements involved in the jumps are incredible. We need to give kids that fundamental dexterity of movement - coaches who coach athleticism rather than athletics.

Coach

3.5.2 Family and friends

To achieve success coaches believe that the role of family and friends should be one of background support rather than hands on involvement. Young athletes gave many examples of how their parents had supported them through their careers. These included providing transport, to training and competitions (in some cases being prepared to travel significant distances), funding for coaching and equipment, and moral support. The most

effective parents impart an enthusiasm for sport in general, and for athletics in particular. They can also provide appropriate counselling when progression and success is elusive.

I stay with my mum and my brother, and my mum helps me out financially. She appreciates the effort I'm putting in, and she thinks I treat the house like a hotel. She's not one of these pushy parents. I've always wanted to do it for myself.

Female athlete, still in system

I've always had support from my family. They've always understood about training. Before I could drive, they'd give me a lift.

Male athlete, still in system

Friends can provide practical support to some extent, but athletes benefit more from an understanding attitude with regard to the training and lifestyle commitments required to achieve success. This understanding was most likely to come from other athletes, who are mutually supportive.

Family have definitely helped money wise and friends have always supported me, keeping an eye out for me and making sure I do my sessions I suppose.

Male athlete, still in system

As I said, my friends are athletes too so they are very supportive, and my friends that aren't athletes are always Googling me and stuff!

Male athlete, still in system

The financial burden of never having any money, and seeing your friends move on from school and college into jobs, and start earning money is a lure which plays on your mind.

Successful female athlete

It is just as crucial for parents to put athletes' wishes ahead of their own as it is for coaches. Some parents are unaware of the culture within athletics and can bring what is considered to be inappropriate behaviour from other sports.

You always have parents to deal with. Parents want success. They're pushing their kids to be successful. Parents come and say 'That's not enough. Why is she still doing this? I want her to do this.' That's also an issue.

Coach

One national event coach had an interesting take on how the sport could provide discipline and structure to children from challenging environments:

We train out of [an inner city area] and they come looking for it [discipline and structure], but they can also get that really effectively from gang culture. There's a hierarchy, a leader, rewards for doing something and doing it well. Now we're getting crap kids with no motivation because we're getting posh parents who are making them stay. Before, everyone did athletics. The inner-city kids had no family but they had a family in athletics. We need to address that as well.

Coach

In contrast with this rather downbeat assessment, many athletes who were still competing could relate to the concept of an athletics family, which was felt to be one of the additional benefits of participating in the sport:

The university athletics club were so welcoming and friendly that a training session was a social occasion in itself; it taught me to look forward to training and the athletics family bonds are strong. Most of my close friends I met through athletics.

Successful Female Athlete

3.5.3 Support services

Support services are generally available to athletes who are in the 'system' (that is athletes who have been identified for special support) but a gap exists between successful athletes who are funded, and those who are on the fringes of achieving funded status. Funded athletes have free access to support services such as physiotherapy and sports massage, while free access for other athletes is often dependent on which university they attend. A two tier system has begun to emerge at university level, in which athletes who have

already achieved some measure of success, such as those on athletics programmes at Brunel, Loughborough and Bath, receive free access to support services through scholarships and talent support schemes, whilst other athletes are required to pay either a subsidised or full market rate.

This situation has the potential to create a vicious circle whereby access to support services is guaranteed by reaching a performance threshold, but this is less likely without the funding to train full time and the injury prevention and rehabilitation made possible by physiotherapy and massage.

There is a support system for the elite athletes from the team. They get extra money. I applied, but because I didn't compete last year, I can't get the money. So I need to post some performances before I can access that, to demonstrate my ability.

Male athlete, no longer in system

The emphasis for the athlete is on performing. If they're not performing they won't get those bonuses, and that's what they are - bonuses. If they don't get it, they might fall out of the sport. If they do get it, they might go on to represent their country at a very, very high level.

Coach

The most popular support services among athletes are physiotherapy and sports massage, with more limited use made of nutrition and psychology services. One successful senior athlete explained that importance of establishing a rapport with the people who provide the service, exemplified by being open to their suggestions. Those who have accessed the full range of services feel that they have benefitted most from remaining injury free, and by recovering more quickly from injury when it does occur.

It would have a big impact, especially with nutrition and training. You'd definitely get fitter and stronger and that's the way to prevent injuries.

Male athlete, still in system

The medical [support] is really, really helpful, because if I got injured today I could see a physio straight away - that's invaluable really, I've made good use of that. Through my injury I was able to see a top class physio twice a week and everything was paid for as well. My operation and everything. It made my recovery quicker.

Female athlete, still in system

It's really important because as you get older the body breaks down and this support prevents me from getting injured. Psychology allows me to channel energy in one direction rather than wasting thoughts on things which are irrelevant.

Male athlete, still in system

Interestingly, the psychological reassurance provided by access to support services is often as important as the physical and physiological effects. There is a good level of understanding that without physiotherapy and massage, rehabilitation and recovery take longer, with a higher risk of relapse. However, as a note of caution two successful senior athletes highlighted the danger of becoming over-reliant:

I couldn't have been in the position I was in without their help, but I have a better understanding of my body. It's good to know that they're there. It's a useful safety net. The problem is a lot of athletes fall into the trap that because it's there it has to be used. [Name of athlete] is in the treatment room every single day. If he didn't have physio his mind would go.

Successful male athlete

I don't get injured so I don't use the services to their maximum like some people do. It's another percentage of the package.

Successful male athlete

While it is difficult to quantify the impact of free access to support services, one athlete who lost this access to support services was able to express the effect that their withdrawal had had on his training programme:

I get that once or twice a month but I used to go once or twice a week before TASS was withdrawn. So far it's had no effect on performance. So far!

Male athlete, still in system

Not everyone understands how much of an advantage these support services can be:

It helps your planning because in terms of preventing injury it's a massive tool. It keeps you injury free and on the track. So it's a massive help. Not a lot of athletes have access to that, and I don't think they realise the importance of that either.

Successful female athlete

They [other competitors] used to get extra coaching through the EIS, and I think a couple of them got physio and nutrition advice. They used to ask me what I ate, and when I told them I just ate whatever I wanted, they couldn't believe it. They'd say things like 'how can you even run eating that stuff?' But I didn't know any different. Maybe that's why I didn't make any progress!

Male athlete, no longer in system

3.5.4 Drop out

The issue of drop out and retention in sport is a subject which taxes both the participation and the elite ends of the sports development continuum - particularly amongst girls and women. The Women's Sport and Fitness Foundation (WSFF) in 2010 identified eight factors why girls aged 16-18 dropped out of sport as listed below:

- ◆ Time for something new;
- ◆ Competing social interests;
- ◆ Conflicts with other interests (time);
- ◆ Lack of players;
- ◆ Lack of support from schools;
- ◆ Poor coaching / teaching;
- ◆ Transition from junior to senior leagues; and
- ◆ Not enough opportunity to play in matches.

To a greater or lesser extent most of these factors have been mentioned at some point in our interviews. However, amongst talented young athletes, as opposed to recreational participants, we found three additional specific reasons for drop out. First, injuries that prevent athletes from recovering to where they were previously, sometimes with the added complication of poor rehabilitation leading to a cycle of continual breakdown.

I was injured, and then began to lose my fitness as a result of the injury. Also I had to focus on my A-levels and just lost interest in going to training.

Female athlete, no longer in system

It depends on how long you're injured. One guy was injured for 18 months, lost funding and had to work harder to get back.

Coach

Second, being caught up by other athletes whose physiological development was not as advanced initially but has now enabled them to bridge the performance gap. Third, major changes in an athlete's life such as choosing to prioritise academic study over athletics training; going to university; changing coach; or starting work.

My times didn't seem to improve no matter how hard I trained, my 800m time stayed the same for 4 years as did my 400. When I first set these times they were very respectable but the older I became the less so.

Female athlete, no longer in system

I did 1500m at the national schools but I kept getting the same times. I wasn't getting any quicker, with the coach I had, then I went to a military boarding school, so I didn't really have much time to progress to the best coaches.

Male athlete, no longer in system

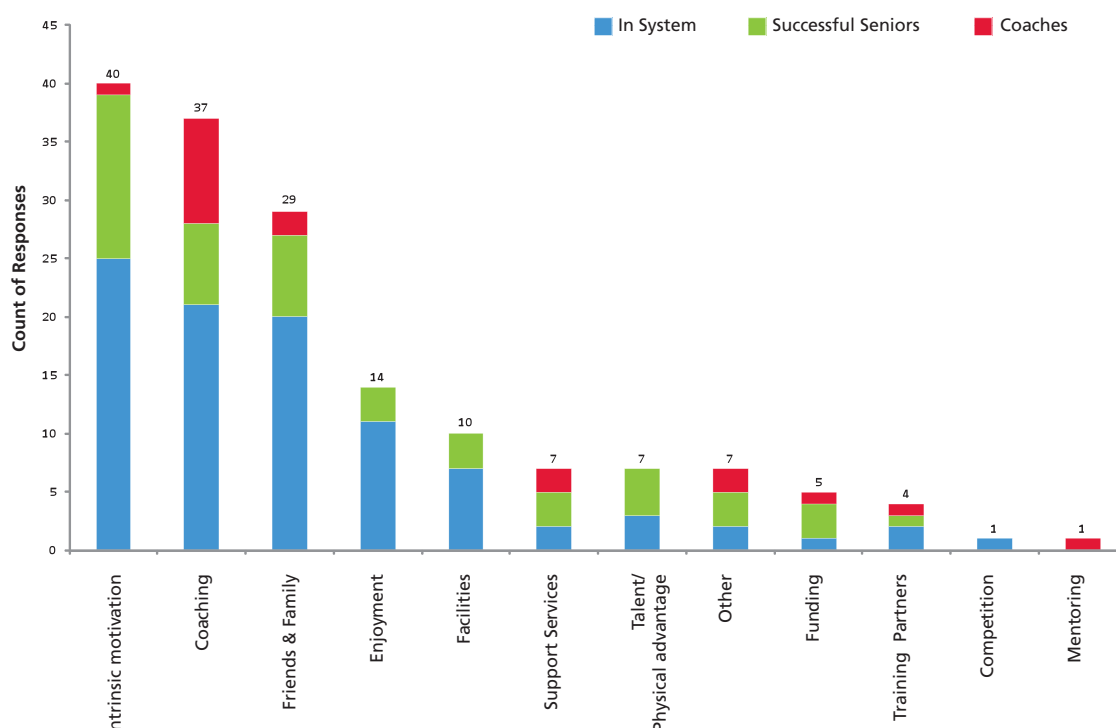
From Under 15s, those that are very good at Under 15s tend to be the large athletes that have matured earlier, and I've found they don't handle it well when the others start to catch them up or improve. I'd rather have someone coming through as an Under 17 or Under 20, who's been a good athlete at Under 15 but not brilliant.

Coach

3.5.5 Critical Success Factors

In the final part of the surveys, athletes and coaches were asked to identify the three most critical success factors that enable athletes to achieve their full potential. Graph 16 below shows the distribution of all the responses made. Three factors accounted for 65% of the responses, namely: intrinsic motivation; coaching; and the support of family and friends.

Graph 16 - Critical Success Factors



Overall, 68% of respondents stated that some form of intrinsic motivation was a critical success factor or success in athletics. Of the athletes we spoke to, this amounted to more than three quarters of young athletes who were still in the system, and over 80% of successful senior athletes. Examples included ambition and the ability to keep long term goals in sight, commitment to training early in the morning or late at night, and a certain amount of grit and determination. Two successful senior athletes summarised the issue:

Without my stubborn determination I probably wouldn't have continued athletics until the age of 25. I probably wouldn't have made it through my late teens if I hadn't been so bloody minded.

Successful female athlete

I've got a strong mental attitude. I'm like a cockroach. You can't get rid of me!

Successful male athlete

The second highest number of responses (37) identified coaching as a critical success factor. Younger athletes were more inclined to mention their coach than senior athletes, perhaps reflecting the change in the nature of the athlete-coach relationship identified earlier, brought about by success and achievement. Not surprisingly, almost all coaches stressed the importance of good coaching, but athletes were also keen to acknowledge the critical role of the coach:

Having good coaching made the difference in getting to where I am now. Some club coaches use the wrong methods which don't produce good athletes. The relationship with my coach is key. Some colleagues have picked up bad habits from their coaches which hold them back.

Male athlete, still in system

Half of the respondents acknowledged the support of family and friends. Younger athletes were more likely to respond in this way, which reflects their continuing dependence on this support network. Older athletes were less likely to mention family and friends, but there was an admission from one senior athlete that support and encouragement from family and friends was vital "when the going gets tough". Only two coaches cited the

importance of good support from family and friends. A male runner outlined suggested that:

Good support from my friends and family...helped me develop and enjoy the sport.
Male athlete, still in system

The top three critical success factors all relate to human inputs: intrinsic motivation; coaching; and, family and friends. These can be divided into two groups, namely: internal human inputs (intrinsic motivation); and, external human inputs (coaching and family / friends). The remaining less dominant comments referred to a wide variety of factors, of which the next most important were enjoyment of the sport (mentioned by 14 respondents) and facilities (10). In the case of the latter, it was not just proximity to facilities which was important, but the quality of the facility itself. Indoor facilities in particular were highlighted, with obvious benefits for winter training.

I couldn't do half the training I did if I didn't have an indoor track... When things are broken, and get replaced, because clubs can't afford to do that. I know Brunel is run through the university so maybe that's why.
Male athlete, Still in System

As with support services, the withdrawal of facilities caused major problems for some athletes. One female sprinter who had dropped out of the sport described why it was so important to keep facilities open and in use:

Keep the stadiums open. My old club in particular has suffered, because the school events used to be run there, so the older ones are dropping out and the new ones aren't getting identified in the sport because there's no competitions happening at all. If you're interested you go, but I'd never heard of it, so if I hadn't been identified, I'd never have gone at all.
Female athlete, no longer in system

Whilst resources such as facilities, support services and funding are no doubt important ingredients of an elite athlete development system, these are aspects of a 'hard' infrastructure surrounding athletes. Clearly, amongst our respondents the most important critical success factors are the 'soft' infrastructure of intrinsic motivation, high quality coaching and support from family and friends.

3.6 Key points

- ◆ The most common routes into athletics for our sample were either talent identification by school teachers who referred young people to clubs, or via parents who were athletes / athletics club members themselves.
- ◆ Generally athletes experienced a broad based introduction to athletics and specialisation tends to increase with age.
- ◆ Coaches acknowledge that all round athleticism is important, even if this means that youngsters they have trained switch to other sports.
- ◆ There are mixed responses to the supportiveness of schools which seems to vary according to the personalities and key personnel within particular schools.
- ◆ The clear preference among coaches is that to begin with athletes should engage in an array of athletic disciplines, with specialisation following at a later stage. The first priority is to “coach the athlete, then the body, and then the event”.
- ◆ Whilst almost all athletes enjoyed competition, coaches have mixed views about it notably the transition for junior to senior and inappropriate competition in club events to earn points.
- ◆ As athletes develop, so their training increases in terms of its frequency, duration, intensity and range of activities engaged in (e.g. plyometrics, weights etc).
- ◆ Most senior athletes train on six days per week and frequently more than once on the same day.
- ◆ Avoiding injury is seen as a major source of competitive advantage for athletes, whilst for those who do become injured proper rehabilitation provides the best conditions for avoiding drop out. Repeated injury and an inability to recover previous levels of attainment is common amongst those who drop out.

- ◆ University is seen as a mixed blessing for athletes. It can be a good environment in which to develop if the right infrastructure is in place. Equally, the lure of being away from home, often for the first time, and the social life available to students can be a significant distraction.
- ◆ High quality coaching input is widely acknowledged as being the most important external input to an athlete's development in the sport. The relationship between coach and athlete is one which evolves over time rather than being fixed.
- ◆ Athletes and coaches report a shortage of suitably trained coaches, this can result in high coach to athlete ratios in training which in turn leads to a sub-optimal training experience.
- ◆ Family and friends are important to the development of athletes in terms of practical support such as transport to training and events and financial help, as well as emotional support to help keep athletes focused and grounded.
- ◆ Support services, notably physiotherapy and massage, are inputs that are valued by athletes. For those outside of official support programmes, access to support services is patchy and at times expensive.
- ◆ Athletes and coaches identified three key critical success factors that drive achievement, these are: intrinsic motivation, coaching, and the support of family and friends. These are human inputs that form a 'soft' infrastructure around athletes and were found to be more important than 'hard' infrastructure inputs such as facilities, support services and funding.

4. Where next?

The purpose of this research was to provide a basis for England Athletics to evaluate and inform existing as well as future policy. All too often initiatives in the past have been based on anecdotal evidence and without a clear rationale as to why certain policies have been pursued. This report can be seen as serving two key purposes. First it provides a retrospective justification for certain actions that have been taken in previous years, key amongst these are:

- ◆ building in the principles of the UKA Athlete Development Model into the core of all initiatives designed to recruit and retain young people in athletics;
- ◆ realising the importance of teaching youngsters the basics of athleticism as a building block to a more serious career in the sport in later life; and,
- ◆ having pathway resources (Sportshall, QuadKids, Schools Super 8 and Athletics 365) consistent with UKA ADM to underpin the delivery of athletics.

Second, the evidence in this report provides a basis for more confident strategic planning in the future. Our analysis of the critical success factors reveal some interesting but perhaps not surprising insights into what athletes and coaches consider to be important to success. Of paramount importance is the human infrastructure surrounding an athlete. The starting point must be that the motivation to achieve an athlete's potential comes from within. Assuming the motivation is there, potential can be realised by effective coaching and a supportive network of family and friends. Whilst access to facilities, support services and funding are also identified as being important, they are less important than the human infrastructure. This point can be appreciated in full by the following quote from Helen Clitheroe following her gold medal in the European Indoor Athletics Championships in March 2011:

I've always been there in the background trying. I've been to Kenya recently and I've been working very hard – I think it's just a combination of things really, and I believe in myself. There were definitely times when I thought about giving up. But my husband Neil said I'm a long time finished, and told me not to give up, and this is reward for all the hard work over the years. I hurt my foot at the start of the summer and just thought to myself 'what's the point?' but Neil just kept me going, and the Commonwealth Games gave me something to aim for. And then going to Kenya for the training camp was great for me. I am full-time and I have been funded in the past but it has been very difficult to keep going financially.

At the start of this research we did not know what to expect as there was little of its type to build on. Consequently whilst there are some clear findings, subject to the caveats stated, we also realise that many new questions have been raised as a result of our work. England Athletics is fully aware of this issue and indeed has agreed in principle on the broad content for subsequent phases of the research. Furthermore, England Athletics recognises the importance of continuing the tracking of the cohort featured in this research as well as the need to track other cohorts. It is by understanding how to get the best out of talent identification, development and recruitment that the UK will maintain its position as one of the world's top athletics nations. In the context of 'the global sporting arms race' the pursuit of success is vitally dependent on continually holding competitive advantage over rival nations. This requires a commitment to continuous improvement because in the current environment standing still is in effect going backwards.

5. Appendix 1: Case Studies

Many clubs and providers of athletic activity and competition for young people are already delivering some excellent and innovative work across England. They are both embracing the principles of long-term athlete development and placing the interests and enjoyment of the athlete at the heart of their work. On the following pages you will find brief details of a selection of these, covering the key themes of competition, school-club links, talent development and multi-event conditioning.

5.1 North London Area Inaugural QuadKids Final

Lee Valley athletics stadium is a UK Athletics specified 'High Performance Centre' and it was just as well as over 100 of the best QuadKids school children in London used it as a venue for their inaugural North London Final on 11th July 2011.

The quality and 'High Performance' of the competition was evidenced by the fact that 28 Boys & 13 Girls achieved UK Athletics' highest Quad Award level of Gold – this equated to over 35% of all competitors.

However, the competition focus was to identify the winning school team from the four North London Boroughs of Enfield, Waltham Forest, Haringey and Barnet and so while individual glory was a superb bonus, the winning team would need all eight competitors to prove themselves as true teamsters over all four disciplines of sprinting, throwing, jumping & running.

In the end, after a very close competition it was Enfield's Hazelwood School who reigned, closely followed by Henry Maynard & Yardley from Waltham Forest - however, as agreed by all on the day it was all fourteen finalist schools who made the event such an exciting success.

To ensure the athletics talent had a clear club pathway all 112 children were given talks from representatives from England Athletics McCain Athletics Networks – Jane Farrier of Orion Harriers and Lee Valley McCain Athletics Network and Graham Norris of Highgate Harriers and North London McCain Athletics Networks.



QuadKids London co-ordinator Ben Pochee said

"Today's event was a clear athletics success story on several levels, from 112 school competitor finalists enjoying an athletics experience at a leading centre of excellence, to the high quality performances themselves on show and the bridging work with England Athletics McCain Athletics Networks. Many thanks must be given to all the volunteers and Young Leaders who made it possible, and I know they, like me, will now look forward to seeing many of these talented children at their local North London athletics clubs soon"

5.2 Birmingham Athletics Network Initiating School-Club Links

All clubs rely heavily on volunteers to help grease and oil the machinery that keeps them operating. These range from coaches right through to the person who makes the tea on club nights. Clubs have also relied heavily, in the past, on local schools to provide the talent that our volunteer coaches and team managers have fashioned into champions. This has been the case for decades however in recent times these vital links have been eroded.

There are less and less people coming forward to volunteer and those that do so have less and less hours to offer due to the ever increasing pressure of life. Birmingham McCain

Athletics Network have looked to address these needs in a very simple but effective way, according to Keith Holt, the Network's Coordinator.

Contact was made with the Volunteer Managers at two of the local Universities, Birmingham and City of Birmingham. The aim was to offer a project that would engage some of their students (who needed volunteer contact time) and involve them in working with the host Athletics Club and selected local schools. In doing this the plan was to establish 'real' working links between the schools and the clubs.

The project was first discussed with the Volunteer Manager at the University of Birmingham, the Volunteer Coordinator with local Club, Birmingham Running and Triathlon Club (BRAT) and the Head Coach of the University of Birmingham Athletics Club. A simple procedure was agreed which set the objectives, responsibilities and outcomes of the project.

Students were canvassed with two volunteers coming forward. A meeting was then arranged by the Network Coordinator to explain the project to all parties before stepping back to allow the process to develop.

So where are we now? The two volunteers directed and supported by Mike Bilston, Club Volunteer Coordinator for BRAT, are working with the first of their local schools, Harborne Hill Academy, providing coaching support. With this link now firmly established a dialogue has been opened with the school's Head of Sport and Bilston to establish an agreement between the two parties. The aim of the agreement is to identify how the Club can support the development of athletics within the school whilst in turn the school will aim to see how it can support the Club in its drive to develop new talent.

Head of Sport for Harborne Hill Academy Paul Deakin is extremely keen to develop athletics within the school and said, "The Birmingham Athletics Network is a great idea and this link up with the BRAT club and the University of Birmingham is fantastic for us. It is giving us the opportunity to use their first class facilities and to tap into their coaching expertise. We have some very talented athletes at the school that will benefit enormously from this link up".

With a ready supply of students needing volunteer contact time and both Club and schools keen to work together this programme should have real sustainability.

5.3 Bradford Athletics Network – Ilkley Harriers

Junior Volunteer Training Programme

Over the last few years several of Ilkley Harriers' older juniors (aged 14 to 18 years) have helped out at the athletics sessions that are organised each week. All the junior helpers have gone through the Junior Ilkley Harrier system themselves and are familiar with the activities that the club do and the format of the coaching sessions that are run. Their knowledge and input has been invaluable to the club's coaching programme.

At the end of 2010 the club decided to give all these junior volunteers the opportunity to gain a 'real' qualification that would not only be useful on a CV but also provide the general leadership skills for everyday life. The leadership awards that the volunteers are following will run over a period of years which will not only give the club a constant supply of volunteer help but also provide a good deal of continuity within the club's coaching programme.

At the beginning of 2011 having spoken to England Athletics local Club and Coach Support Officer Lucy Birkenshaw about the idea and gained an innovations grant of £300 from England Athletics, Ilkley Harriers (part of the Bradford McCain Athletics Network) embarked on the project.

Three coaches who have been involved with the junior section since it started in 2002 are involved with the volunteer programme. One coach through her role as Rural Development Worker, Keighley & Ilkley Voluntary and Community Action recruited Katherine Robertshaw to the team. Katherine is not involved with Ilkley Harriers but is a tutor of leadership courses and will oversee and lead various course elements. See www.firststepsportsawards.co.uk

Shirley Wood told England Athletics how the club went about the process:

"The plan has been to start all fourteen of our junior volunteers on the course elements for the Level 2 Award in Sports Leadership and then through a bridging

course, those who wish to, will have the opportunity to progress on to the Level 2 Award in Community Sports Leadership when they are 16 years old."

Both qualifications share a number of common units so a bridging course allows the individual to continue to expand their knowledge and potential as a leader without having to repeat units already covered - details of this nationally recognised award can be found on www.sportsleadership.org.

Shirley continues,

"We are now several months into the Sports Leadership course and all the juniors have completed some of the course units and have been gaining volunteering hours at weekly athletics sessions or races that we organise. Alongside qualified coaches all the juniors have had the opportunity to coach certain elements and are gaining both in confidence and experience."

The course is as practical as possible and the elements of developing leadership skills, planning, leading and evaluating, promoting a healthy lifestyle, role models in sport, organisational skills plus others will be covered. Even in such a short time we have found that our juniors, because of the structured approach to volunteering are much more focused on what they are doing."

Part of the practical work is assessed and it is planned that the juniors will lead the athletics activity at the Year 6 sports transition day at Ilkley Grammar School at the end of the summer term. At the transition day all the Year 6's from local primary schools who will be transferring to the school in the autumn are brought together for a day of sport.

Lucy Birkenshaw summarised,

"This is an excellent example of how a club is engaging the young volunteers and helping them gain new qualifications. This project will be showcased as an example of good practice within the athletics networks. The coaches are doing a fantastic job!"

5.4 Essex Athletics Network

Havering Inter-Schools QuadKids Athletics

How do you provide a high standard athletics experience to over 1,200 children & 42 schools in two days and link with the Athletics Club Network? Well, Ben Pochee, the QuadKids coordinator, had provided the following case study of how the Essex Athletics Network with Havering Schools Sports Partnership (SSP), Havering Mayesbrook AC and QuadKids did it!

Havering Schools had previously had a reputation for hosting high quality Inter School traditional athletics, however, although of a high quality this meeting format only allowed each child to take part in one event and to do this they had to wait the entire day. In addition the long term organisers of the previous Havering traditional athletics event had decided in 2010 to retire and a looming potential athletics void became apparent.



Therefore the challenge of using QuadKids was to ensure a high number of children could experience all four QuadKids athletics events (run, jump, throw & sprint), in a shortened time window and ensure quality of athletics experience was not compromised.

To include all schools the events were split into Small Schools (single form entry) on day one, Year 3, 4, 5 & 6 children (split boys / girls) and Large Schools on day two – Results were combined to announce a final Team winner for each category.

To meet the challenge the planning for the summer events started in January 2011 when Ben met with Sharon Phillips the lead organiser from Havering SSP. It was agreed that to deliver such an ambitious two day event with 550 children on day 1 and over 700 children

on day 2 it would require military precision on the day to retain quality and prevent large numbers becoming problematic as they all competed at the same time.

A big barrier was the perception of 'dumbing down' the athletics experience and demonstrating success to teachers / parents who previously had only known 'traditional athletics'. On top of this were the physical logistical barriers of limited car parking space (expected 500+ cars and coaches from each school) and issues with local residents complaining about traffic. Also the QuadKids scoring spreadsheets had not had to cope with such large numbers. So the IT team had to create bespoke spreadsheets that could handle race numbers digits that went up to 1,500 and provide capability for the data entry for up to 400 results per page.

The biggest impact has been ensuring the Havering SSPs have the motivation, experience and training to continue to deliver quality athletics over the forthcoming years and grow the link with both Essex Network and local supporting clubs.

Formal evaluation is still underway at the time of going to press but all the anecdotal feedback has been superb, with teachers who were ardent traditional athletics supporters converting to QuadKids due to high involvement and fact it does not restrict children to a single athletics discipline. As this parent testifies,

"Hi Ben, I got your contact from the QuadKids website. I attended a QuadKids event yesterday at Hornchurch Stadium that my 11 year old daughter was competing in. It was the first time I'd seen the QuadKids format and I just wanted to let you know that I thought that it was a really smart format. When I read in the programme that it is designed to be both 'competitive and inclusive' I must admit I was a little cynical – but it really is! And most importantly, my daughter thoroughly enjoyed it – even the gruelling 600m final event!"

As the event was hosted on the day in partnership with both Havering Maysebrook AC and Essex Athletics Network, the network are now able to provide a bridge from school to club and assess from results data children who achieved Bronze, Silver & Gold UKA Quad Awards and ensure their potential is both recognised and supported by their local London & Essex club Network.

In addition the simple truth is that without the QuadKids format being utilised 1,200 children would not have had an athletics experience in 2011. It worked because the QuadKids format & scoring system made it physically possible, and because of the diligence and thorough planning of all partners (SSP, Club, Network and QuadKids) – meetings between all parties and assigning roles & responsibilities early in the process ensured everyone one knew objectives and what their role in event planning and execution. To deliver event success on the day we had to train and use over 50 Young Leaders from Cooper Coborn School and much credit must go to these individuals for their superb contribution.

Sharon Phillips, Havering SSCO enthuses about the event,

"Some teachers were initially sceptical about an event so different to the traditional district sports but it was those teachers who thanked us most at the end of the day! It really turned out to be a team event with the children cheering their team mates and interacting with teams from other schools. The children felt that they had taken part in a bigger and better way by being allowed to compete in four different disciplines."

Ben Pochee confirms that,

"The project will grow next year, the network and SSPs have already discussed how we might be able to provide the same athletics format to more than 1,200 children at the same time but at two sites and create an instant virtual scoring system on the day."

Progress indeed!

5.5 DASH Athletics

Young Athletes Quadrathlon

On Saturday 25th June 2011, 200 young athletes took part in the Annual DASH Athletics Young Athletes Quadrathlon.

The Quadrathlon is a multi-events competition started in the 1990s, involving a sprint, middle-distance race, jump and throw. The Quadrathlon and its format have led the way in

the development of outdoor short-format competition for young athletes for many years, as seen in the recent development of several other very similar forms of short format competition.

The Quadrathlon Team is led by DASH Athletics Club and is made up entirely of Club volunteers who are passionate about pushing the boundaries of current competition formats to help develop the best possible competitive environment for the young, developing athlete. The aims of the Quadrathlon team are simple: to provide an appropriate and meaningful short-format competition for young athletes within an inspiring environment that replicates the atmosphere of a 'Big Event' competition.

The Quadrathlon format can be easily adopted for different environments and 2011 sees the launch of 'Tri Athletics' a school-based programme to support the work done by the Quadrathlon team. The Quadrathlon uses its own simple scoring system that has been developed through analysis of performances in past competitions, and this is supported by a powerful spreadsheet scoring system that is quick and easy to use and requires no training.

The DASH Quadrathlon is open to athletes aged seven and over, including the Under 9, Under 11, Under 13 and Under 15 age groups. Athletes from local schools are encouraged to take part and compete against Club athletes, and many young people have joined both DASH AC and other Clubs after competing in the Quadrathlon.

The 2011 DASH Quadrathlon was attended by athletes from over 40 clubs and schools, including: DASH AC, Spenborough & District AC, Vale Royal AC, Leigh Harriers, Scunthorpe & District AC, Lower Park Primary School, Hayfield Primary School, Halton & Frodsham Harriers, Liverpool Harriers, Bromsgrove & Redditch AC, Wigan Harriers, West Cheshire AC, Sale Harriers, Horwich RMI Harriers, East Cheshire Harriers & Tameside AC, Salford Metropolitan AC, Sutton St Helens AC, Blackburn Harriers, St Leonard's School, Hyndburn AC, Quinta Primary School, City of Stoke AC, Tower College, Cannock & Stafford AC, St Bartholomews Primary School, Blackpool, Wyre & Fylde AC, Rochdale Harriers, Trafford AC, Manchester Harriers, Newcastle Staffs AC, Vernon Primary School, City of York AC, City of Sheffield AC, Kingston upon Hull AC, Carr Hill High School, Birchfield Harriers, Oldham & Royton Harriers, Warrington AC, Preston Harriers, Birmingham Running, Athletics & Triathlon, Club (BRAT)



Comments included:

"Just want to say what a great event the Quadrathlon 2011 was. The atmosphere was fantastic. The organisation was great and it was lovely that the children had access to coaches whilst warming up etc. The children really enjoyed themselves, thanks to DASH for a Super Event"

"Congratulations on the superb quadrathlon meet today. I can't remember the last time I went to such a well organised and athlete friendly event. Also, the facilities there are second to none. Even the music between events was entertaining. Well done to all the organisers and volunteers. Hope to see you again next year."

"Congratulations to you and all your team as today was a brilliant day and superbly organised and well run. Thanks for all your efforts."

"A big thank you to you and all your team for the hard work you put in for the Quadrathlon. Joel had not been to an event like this before and although he didn't do that well he really enjoyed it. He especially liked the way it was so professionally put together, like what he's seen on TV, and he has now got himself PBs which he wants to work at beating. It's really got him buzzing about athletics and he says he's going to work at getting PBs that can get him onto the podium. Thank you again for all your effort. Just one request: can we have some better weather next time?"

For more information visit www.dashathletics.co.uk

5.6 Kent London Athletics Network

Bromley School Sport Partnerships QuadKids

Following the success of a QuadKids event held for Bromley Primary School children in year 3 & 4 held in 2010, the 2011 event was extended to cover school years 3, 4.5 & 6. Both events were organised by the Kelsey Park SSCo with the support of 365 Athletics Academy, the Kent London Athletics Network Co-ordinator, other local SSCo's and Young Leaders from Hayes Secondary.

In a brilliant atmosphere the team winners were presented with certificates and medals by Bromleo the 2012 BSSP Mascot provided by 365 Athletics Academy in conjunction with the KLAN. A number of high achievers in the Year 5/6 event have been offered free training sessions at the Bees Academy in recognition of their performances.

The event provided an excellent opportunity to promote the Bees Academy and as a result a number of the participating schools now have Bees Academy Outreach clubs operating on their premises. In total more than 350 children attend at least one coaching session a week either at their school or at Blackheath & Bromley Harriers AC's home track at Norman Park in Bromley.

Paul Patten the 365 Athletics Academy Coordinator says,

"There is growing interest in Athletics within the borough and standards are improving amongst participants. We are seeing parents taking a lot more interest in their children's involvement in athletics. QuadKids is fun competition for the participants and easy to set up and run. The event format means that a large number of participants can compete with minimal non-active time."

5.7 Leicestershire 2020 Vision Athletics Network

Junior Athletics Club-School Links

In Leicestershire a number of interesting models are emerging for schools to create strong links with relevant local clubs. A pilot programme has been put in place to identify 'partner' schools linking them directly to a club with agreed outcomes and objectives from both parties.

Discussions took place with three schools, two in the Fleckney and Kibworth area and one in the Wreake Runners area to establish needs and wishes from both sides. The plan essentially comprised of a long term coaching and support programme being put into the schools, initially supported by the Network but with a plan put in place to make these long term partnerships sustainable.

Kibworth School was the first success with the school agreeing that the F&K coach could charge a fee of each pupil for attending an after school club – the immediate result of this was that now 11 children from the school regularly attend the Wednesday club sessions as well as continuing with the after school club which attracts in excess of 20 young athletes each week.

Fleckney School was put together following a slightly different model with the club subsidising their coach from revenue gained from introducing a surcharge on their Saturday sessions.

The partnership in the Wreake area was formalised with Gaddesby School who the club already had loose links with. Again a slightly different model of sustainability was introduced as the link was initially funded through the SSP funding with the club and school now agreeing to raise money on joint projects to enable the partnership to continue to flourish. This initiative alone has brought seven new club members and the after school satellite club which is on-going at the school continues to attract 20-30 for each session.

The school/SSP and club also all contributed to shirts which the school wore for the first time at the county school trials which also heightened the clubs profile and hopefully will bring in more members. Network Coordinator John Skevington commented

"From these examples other schools have enquired to the Network about putting partnerships into place and feel that this is a major step forward in developing long term school/club links which will form a major part of our Year 2 plans and development. We are sure that these models will continue to bring success."

5.8 Greater Peterborough Athletic Network

Summer QuadKids Events

In 2010 the Peterborough Athletics Club (PAC) junior section piloted QuadKids running four events over the summer. Due to the success of the events and the formation of the Greater Peterborough Athletic Network (GPAN) the competition expanded to include athletes from Werrington and Eye.

Working alongside Vivacity, an independent not-for-profit organisation, who supply the track facilities free of charge, GPAN are delivering four open QuadKids meetings over the summer of 2011. Following the first meeting in May there are numerous benefits of organising the competition. These include:

- ◆ Athletes from local clubs are provided with the opportunity to access competitive athletics in a fun, relaxed and enjoyable environment.
- ◆ The opportunity for Officials and Coaches to network; share good practice, experience and expertise on a regular basis.
- ◆ QuadKids provides a fantastic potential to recruit parents. For example helping to rake the sandpit etc.

Colin Pettit, coach at PAC and Chair of the Peterborough Athletic Network commented

'QuadKids is a great way of bringing clubs together to compete in a fun, yet competitive short form competition. In addition QuadKids is an excellent tool to monitor athlete performances over four events and encourage athletes to achieve their athletic potential'.

5.9 Norfolk Athletics Network

QuadKids: providing more competition for under 11s

The Norfolk Athletics Network launched in September 2010 agreed that one of the key actions to be addressed within the plan was to improve competition opportunity for under 11s particularly during the summer season and increase club participation levels. There is good provision for under 11s during the winter season through a thriving and successful Sportshall league.

It was felt by the Network that QuadKids competition would be a good choice to explore. On researching it was found it would be simple to organise and 12 volunteers would be adequate for up to 100 children. It can be completed within a three hour timescale and it is not necessary to hold it at a track venue. A school playing field would be adequate. Details of QuadKids can be found on the website www.quadkids.org.uk

A Network sub-group was set up with a representative from each club with junior sections. The Network Coordinator facilitated the work of the group and appropriate communications. Children have been targeted through schools. The regional QuadKids Coordinator was approached to provide advice to the group on setting up QuadKids competitions. Representatives were also given a copy of the QuadKids competition manual – available from the QuadKids website.

The group agreed to hold four competitions; one each month from May to August and that each competition would be hosted at a different venue to ensure accessibility for athletes throughout the county using an open competition format. The QuadKids competition manual sets out all the information required for different types of events and is very helpful in that it suggests a timetable and also includes a checklist for preparation purposes for example to ensure numbers are ordered, first aid is considered etc.

A QuadKids flyer was developed using QuadKids publicity material and adding venues, dates and contact details. These were distributed via clubs and through the schools courier system.

The first QuadKids competition was held in King's Lynn on Sunday 29th May; 35 children took part. A competition manager role was established for the day to oversee the whole event. The morning ran very smoothly and feedback from athletes, parents and volunteers was very positive. The timescale of three hours was easily achieved and ran ahead of time and it was felt that with numbers up to 100 this would also be the case. The clear information and support resources available from QuadKids made it easy to set up and deliver.

Jane Clarke the Norfolk Athletics Network Coordinator says

"QuadKids is an excellent resource to provide a simple, short format competition activity that does not require a high number of volunteers or qualified officials. The QuadKids structure provides clear information and all the necessary support and advice needed to enable clubs to deliver an enjoyable athletics experience for young people. With a small group of volunteers and limited time, a potentially successful and lucrative activity can be established."

It was agreed to run this pilot series of competitions without charging the children attending but if it is repeated a costing plan would be put in place to ensure costs were covered using low cost venues such as school playing fields. A sponsor will be sought and potentially this could be an activity that would provide revenue for the Network.

5.10 Nottinghamshire Athletics Network

Club-School Links

The Nottinghamshire Athletics Network (NAN) has sought to develop links between clubs and schools through a range of initiatives.

All secondary schools in Nottinghamshire have been provided with four high quality posters which can be displayed around the school to raise awareness of athletics and provide contact details of Network clubs encouraging recruitment.

David Lisgo, Network Co-ordinator tells us that

"The NAN has two representatives that sit on the Nottinghamshire Schools Athletics Association committee. This ensures that the Network is involved in the planning of competitions (avoiding fixture clashes) and ensuring schools information can be disseminated to clubs. This arrangement also strengthens existing, and supports new contacts between teachers and clubs, particularly coaches in the clubs."

At all of the principle schools athletic competitions – Track and Field, cross-country and Sportshall – the Network ensures that there is a visible presence using the NAN pop-up display banner and that ALL competing athletes receive an individual A5 flyer with details of clubs – training nights, training venues, website and contact details.

The Network also hosts two athlete coaching sessions in the week following the county schools championships, one for cross country in February and the other for track and field in June. The top 12 athletes in each race/ age group in the cross country championships are invited to attend a coaching session delivered by endurance coaches from NAN clubs. Athletes who finish in the top 6 in all age groups over all events at the track and field championships are invited to attend an event specific coaching development session. Invitations are issued on the day by letter.

Some 'After school athletics' coaching sessions are facilitated by the Network. All of the local Schools Sports Partnership Managers were contacted by the Network and schools are offered the support of coaches from local clubs in visiting local schools. Four of the six Network clubs have been able to support this initiative with each club linking up with two schools. These sessions are run over a minimum of a six week period and at least one of the sessions is held at the club.

5.11 North of Tyne Athletics Network

Junior Summer Grand Prix

The North of Tyne Athletics Network, (NOTAN) have planned a Junior Summer Grand Prix involving a wide range of partners including North Tyneside Metropolitan Borough Council, North Shields Polytechnic Club, QuadKids, the Tony Blair Sports Foundation and the Athletics Correspondent of the local regional evening newspaper, the *Evening Chronicle*.

Despite a disappointing level of attendance at the launch event in 2010, NOTAN were determined to host a short format competition that would be viewed by all as successful. So this year NOTAN has built on the back of its successful athletics in schools project for 7 – 12-year-olds that aims to establish a year-round athletics programme. The Grand Prix series will provide a natural extension of schools work and allow the network to host a series of events throughout the summer months.

A partners meeting confirmed dates, agreed the competition format and the promotional materials required. Subsequently, NOTAN set about recruiting enough volunteers and officials for the day to enable the smooth running of the event.

Planning was not without challenges of course. These included:

- ◆ Lack of knowledge and expertise in competition hosting. But the expertise of partner organisations in the shape of The Tony Blair Sports Foundation, and QuadKids meant they were soon able to devise a successful competition format that did not rely too much on technology. Several members of the Network also attended a workshop hosted by Northumberland Athletics Network during which Chris Boundy Regional Co-ordinator, for QuadKids did a 'guide to short competition format' training. Following this, the athletics in schools project coaches practised the running of the competition format in the weeks building up to competition day to synchronise their efforts and ensure that the necessary resources were available.
- ◆ The establishment of the competition dates. This wasn't easy and any clash with the North Eastern AA Young Athletes League fixtures needed to be avoided. But common sense prevailed and everyone sat down with partners and established a series of dates when all parties could/would be available.
- ◆ The recruitment of volunteers was key for this The Tony Blair Sports Foundation agreed to place advertisements on their website, and TyneMet College promoted the event to its sixth form students. NOTAN also looked to members of network clubs to see if they too could help.
- ◆ Effective advertising. The event was publicized it through North Tyneside Council's Events Manager (who distributed approximately 4,000 flyers in the schools, libraries and local leisure facilities), England Athletics Regional Network page, at local athletics competitions (for instance, the North Eastern Championships) and NOTAN requested that the local athletics writer Bill McGuirk do a write up of the event in the local evening newspaper, *Evening Chronicle*, and on their own website (www.notan.org.uk).

The planning of this event has had a real impact. It has helped bring all of the clubs and the community together by opening it up to anyone, not only members to clubs. It is bridging that gap and potentially enabling more children into athletics and into clubs. Through the Tony Blair Sports Foundation, NOTAN has enabled more volunteers to help out at each competition and in the future, potentially providing further coaching within the schools.

The sharing of knowledge and expertise and accepting weaknesses brought people together, getting everyone from the children to the parents, to coaches, to each individual involved. The general willingness to get more young people into athletics and provide them with a fun-based athletics experience was a shared ambition and prevented potential difficulties in terms of event formats.

NOTAN plan to keep going into the schools in the community coaching athletics all year round, as well as in the clubs. Hopefully this will keep the interest in athletics and it will continue to have various competitions over the coming year, such as a Sportshall competition in October. Over time it is hoped to develop a satellite club in the Norham area to develop the work in the schools. This will hopefully create even more successful short format competitions in the future, and more talent which will get more people along to the competitions and into the clubs.

Victoria Spence, NOTAN Coordinator says

"This summer grand prix will provide great opportunities for the children in the area which they may not have otherwise had the chance to get. It enables every individual to have a go at multi-event athletics, allowing them great fun over their summer holidays. After this competition, we will use the feedback we received and see how it went and what we can improve on. We will then strive to improve this next time and try and achieve even more people attending the events through NOTAN. We will hopefully put a bigger and better competition on the following year. We will also develop the work in the schools which will enable more interest in athletics."

5.12 North of Tyne Athletics Network

Athletics 365

Athletics 365 has proved to be a real winner in the North of the Tyne Athletics Network (NOTAN). Victoria Spence, the NOTAN Coordinator reports that

"The children have enjoyed the various tasks through Athletics 365 and are keen to keep having a go to improve and get up to the next level which is great, as it is getting them into athletics and enthusiastic about sport. The best part about it is it increases the skills which children may otherwise not have been properly taught, which can help them throughout any sport they may wish to do."

The Athletics 365 course has been fantastic in encouraging people in getting over the initial fear of coaching activities to children when they are unsure of the activity or haven't done them before.

The course was advertised through course finder with Tyne & Wear Sport and through the England Athletics website, NOTAN's website, by email and word of mouth. Support was received by Tyne & Wear Sport to advertise the sessions through them and from Emma Williams, England Athletics CCSO, who agreed to help run the course. Emma enthuses,

"The course is a great first step to getting Athletics 365 into the clubs and to the athletes. Once people go onto the course it gives them more confidence to go out and deliver the activities as they have new knowledge. This can then interest the children, testing them at different levels across different areas. Children soon realized how much fun it can be and it works well as you can meet every individual's need with different difficulty levels throughout."

Although Athletics 365 is only just being introduced into clubs across NOTAN the children are really enthusiastic about it and really want to be able to achieve each task to progress onto the next one to reach the gold level. Victoria says, "They want to see if they can beat their class mates and to progress further and further." This will help bring more people into athletics and into the clubs when they see the enjoyment in athletics and how varied it can be; not simply running, jumping or throwing. With each course they run NOTAN intends to ensure they retain each of the coaches and increase their opportunities to coach in schools and club settings across the region. For the youngsters involved enjoyment is the key!

5.13 Nottinghamshire & Lincolnshire Athletics Networks

QuadKids: a model for short form competition

Traditionally QuadKids for clubs within these networks meant coming together to compete in a competition, and although both athletics networks were positive about developing QuadKids – challenges included a busy competitive season, existing junior competitions and the difficulty in bringing clubs across a large geographical county (e.g. Lincolnshire) together to compete. A challenge which no doubt is common across other Networks.

To overcome this clubs instead were invited to take part in two QuadKids leagues over the summer season followed by an inter club competition at the end of the season.

Example: the Nottinghamshire Athletics Network model

- 1st League to be completed by end of May 2011
- 2nd League to be completed by end of July 2011
- An Inter club competition taking place on the 16th September 2011

This model means that clubs can incorporate the QuadKids events into their club training nights to fit in with their coaching to their junior athletes i.e. over 1 - 4 club nights. It means no demands on coaches/parents/athletes to travel. Both Nottinghamshire and Lincolnshire Athletics Networks purchased Howlers which meant that each club now has everything they need in equipment.

Following the completion of the four events, results were posted on the QuadKids website meaning that coaches can look at their athletes results as well as comparing with other club athletes, as a virtual league:

- 1) Their aggregate scores (points from all 4 events)
- 2) Top individual runners/throwers/jumpers.

Natalie Shaw, the QuadKids coordinator, tell us that

"As an example of success: Rushcliffe AC in the Nottinghamshire Athletics Network, who hadn't competed at previous QuadKids competitions, were the first to send in results of 24 juniors having taken part. This model demonstrates how introducing virtual competition can overcome challenges to delivering short form competition such as a busy competitive season, existing junior competitions and the difficulty in bringing clubs across a large geographical county"

5.14 Wreake Runners

Athletics 365 'Wreake Athletics Academy'

Due to their main club sessions being almost at bursting point, Wreake Runners have established a creative home for Athletics 365 as part of a separate 'Athletics Academy'. This is still linked directly to the club but set on another day as an after school club with a start time of 4pm. The intention is to appeal to a different audience, but encourage skill transfer to club sessions.

The Academy was advertised within a selected amount of local schools and through the club itself. The advertising was purposely targeted in a limited way so they didn't become inundated in the early stages, preferring instead to learn how the scheme would work and come across any pitfalls that may occur.

Following targeted advertising to the 7 -12 age range, 30+ young athletes have now become paid up members of the Academy, each purchasing an Athletics 365 athlete pack for £25 with those enrolling in the first two weeks having the advantage of being given a 'Wreake Athletics Academy' hoody top which used up the profit from the sale of the pack. Each member pays £3 a session which pays for the hire of the facility, the coach's time and also puts an income back into the mother club. The coach is supported throughout the session by two young leaders from a local school.

The scheme has had its challenges and the completing of the assessment part of the book has been an issue for some of the older youngsters and the coach. Following a review meeting it was decided that for the early stages, as long as the athletes could demonstrate at the initial session the skills required that certain parts of the assessment could be fast tracked through so that the athletes could concentrate on learning new skills rather than working through things that they could already do.

In conclusion, the club is very pleased with the model and way the pilot has worked out and the Academy will become a long term part of the club. It is sure that it has provided a long term and sustainable model to progress our young athletes and is also sure that the club itself will benefit long term by producing more competent athletes.

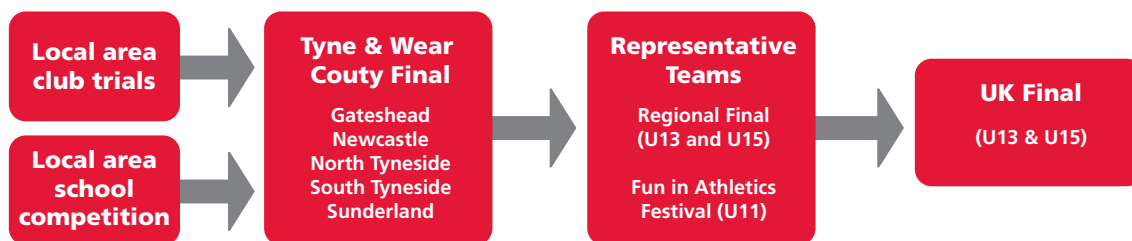
5.15 Tyne & Wear Area

Sportshall Athletics

Sportshall Athletics in the north-east of England is in its infancy compared to the majority of the county. The idea was to develop a structure that would allow the county of Tyne & Wear to be competitive on a regional and national level, whilst also helping to attract and retain athletes in a club setting. This involved the five areas in Tyne & Wear; Gateshead, Newcastle, North Tyneside, South Tyneside and Sunderland. Four volunteers from clubs in Tyne & Wear volunteered to oversee sportshall athletics activity in the county and have been supported by the creation of the networks.

Sportshall athletics works best when it offers both club members and also non-club members the chance to represent their local area and county and possibly progress to national finals. For club members it gives them an alternative focus to cross country during the winter and helps with retention and attendance at club sessions. For non-club members it lets them experience competition outside of the school environment and socialising with club members encourages them to join.

In order to get this combination and select our strongest team the following pathway was put in place:



From a club point of view, the pathway allows them to talent ID and invite young people to try out coaching sessions prior to the outdoor season beginning. This is generally more beneficially to the club and athlete as it gives them time to prepare for track and field competition rather than becoming involved once the season is nearly over as often happens during the summer months. Being involved in Sportshall athletics first can remove the barrier of nervousness and feeling isolated in a new environment as the young person will have already met other athletes and coaches. It also helps to retain an interest in athletics for those already involved, especially amongst the older participants (14/15 years old). In numerous cases children of this age group have decided to focus on athletics alone, whereas previously they may have had another sport as their main activity. In the north-east of England this is especially true of football, which tends to dominate all other sports, however many boys start to lose their interest and this is where Sportshall athletics can help engage them.

The pathway is supported financially by the Gateshead Athletics Network, mainly at county level, however other avenues of funding are being accessed, such as sponsorship by local companies who provide prizes. Tyne & Wear Sportshall Athletics have also formed a committee and constituted the group to allow them to apply for other sources of funding. This helps to ensure the events can be made sustainable and continue to provide opportunities for youngsters to participate in sportshall athletics.

Andrea Fyall, Tyne & Wear Sportshall Athletics, commented

"Through combining the club and school route we have been able to identify more youngsters who may not have been involved in athletics. We have a healthy crop of youngsters who have been identified and accessed a local club, one recent success being Anthony Hogg who is now English Schools High Jump Champion and is progressing well within combined events".

5.16 Wiltshire Clubs

Super8 Pilot Matches

The four Wiltshire clubs agreed to pilot a four-round series of evening Super8 matches across U13, U15, and U17 ages. The reason was that clubs were tired of traditional league fixtures that entailed lots of travel and took a long time to complete and wanted something fast – around two hours – fun, local and with a multi-event ethos.

The main drivers for this change were the Chair and Secretary of Wiltshire AA and the QuadKids organisers. A successful year one event pilot was held in 2010, and a four match roll out in 2011. The QuadKids Regional Coordinator is the central point for coordination

Challenges included getting athletes from all over the county to a venue for a 6.30 start. Some clubs have struggled to get full teams, and getting 150 athletes each doing three events within two hours is very challenging. The first event was 2.45 hours, second 2.15 hours and the third one close to 2 hours. It has been a challenging learning curve and not always easy to get traditional officials to speed up.

But the successes have far outweighed the downsides. The events are great fun, a new way of running athletics competition, and officials and coaches are becoming increasingly positive and it's great for second tier athletes. Notably, this was an informal network approach that wasn't funded by directly by England Athletics, but stemmed from a bottom-up demand for change.

Options are being considered to move to a weekend slot (Saturday or Sunday), to invite clubs from outside Wiltshire, and run two parallel matches that are scored as one.

5.17 Coventry, Solihull and Warwickshire (CSW) Network Under 11 Track and Field League

The seven Clubs in the CSW area which have Under 11 members, (Nuneaton Harriers, Coventry Godiva Harriers, Sphinx AC, Rugby and Northampton AC, Stratford AC, Solihull and Small Heath AC and Leamington C&AC) have created an Under 11 Track and Field League. These clubs recognize that Athletics should be about both personal development and athletics development. Competition is an important factor however there are very few events for the Under 11 age group. There are Open meetings for individuals but the Network feels that it is important that a Club's members can represent their Club and feel part of a team.

Ray Morgan the CSW Chairman informs us that,

"There are conditions which the Network feels are very important for league competitions for the Under 11s. Specifically for the Under 11 age group:

- ◆ *the meeting should be as local as possible*
- ◆ *the meeting should be interesting and fun*
- ◆ *the meeting should occupy the athlete for as much time as possible*
- ◆ *the meeting should be multi events based to reflect the training/coaching regime*
- ◆ *the meeting must cater for any number of athletes in a team. "*

Ray believes that the last two points are arguably the most important.

So Ray continues,

"So we set up the CSW Under 11 League. It is multi event based and every athlete does three events. The events covered were 100, 200, 600, 1200, LJ, HJ, SP, JT (howler), DT, HT (yes – hammer throw!). The results were converted to points and the top four in any team became the A team, the next four the B team and so on as is the case in XC races.

To reduce travel and to cater for any child regardless of club membership or not we set up two divisions – one for Coventry, Rugby and Nuneaton (the M6 Division) and one for Leamington, Stratford and Solihull (the M40 Division).

To make the meeting interesting and fun but still athletically valid we run them in the evenings over two hours . The athletes therefore compete in a different event every 30 minutes. We finish with a relay in which each Team can enter as many athletes as it likes within reason so that nobody is missed out because there are not multiples of four."

In this format, each host club must provide a qualified field referee, track referee, chief timekeeper and starter. All of the rest of the officials are parent 'volunteers'. The refs and chiefs are instructed that their main aims during these meetings are

- ◆ to ensure safe practice
- ◆ to train and coach the parent volunteer officials
- ◆ not to worry too much about rules.

The CSW network has since changed the format to adopt QuadKids, which was not available when the League was set up. According to Ray the advantages of Quadkids are that:

- ◆ it is nationally supported and recognised
- ◆ it is promoted in schools
- ◆ it has superb IT support with web sites and results programmes
- ◆ it has promotional material
- ◆ it facilitates comparisons to others
- ◆ it has reward material – e.g. certificates.

The only disadvantage of QuadKids is that it is limited to four specific events and so every meeting is the same. Previously, for example, there would be LJ for boys and HJ for girls in one meeting then the reverse at the next meeting.

The League was initially funded by a grant from the West Midland Region of England

Athletics and later by a grant from Warwickshire County Council. The grants took away any money issues which might have been barriers to getting the League under way. They now ask host Clubs to pay for their own track hire but the League pays for First Aid as part of our look to make the league self-sustaining. The League has funding to cover First Aid until the end of 2012. Some Local Authorities are very sympathetic to a 'first experience' of sport and don't charge for track hire. Some Clubs have their own First Aider.

Some of the initial funding was used to buy waterproof boards and watches for parent-officials and equipment (1k shots, 1k medicine ball hammers). They found that they can manage without the boards and watches because the refs usually have some and QuadKids only needs Howlers which can be bought (shop around) for as little as £7 each.

We asked Ray what barriers they faced.

"We were particularly concerned about the shortage of qualified officials for all athletics events and we did not want to add to the workload of those who do officiate. Therefore we decided that the Under 11 League should not only prepare and train the youngsters for Under 13 competition but it should also prepare and train their parents to be technical officials. In that way the League is largely self-sufficient and will, over time alleviate the shortages in Leagues for older athletes."

Initially it was difficult to get parents to volunteer to officiate. Most have no experience of athletics at all and were terrified of stop watches and high jump bars. It was found to be more effective and a lot simpler not to ask them. When the athletes of the home club ask their team manager for their vest number they are given a piece of paper to give to their parent/guardian/minder which tells them when and where they are officiating. No negotiation! Nobody has ever refused and all enjoy it.

It is still found that some parents and, even worse, some coaches still insist that children as young as 9 and 10 should specialise. Typically a child who does well in a schools XC event will arrive and insist that they are an 800m/1500m specialist. Thankfully most coaches agree that the general development of a child across a range of skills and events until their bodies have matured is more interesting and physically more valid. They argue with the disbelievers that

- ◆ Regardless of what they are good at now their bodies may change
- ◆ Doing one thing over and over again is boring for children
- ◆ Generalised training includes their 'specialist event' anyway
- ◆ How can they know if the child will be better at 'whatever' until they have tried other things?

To illustrate the point to parents the coaches

- ◆ Explain that World Javelin Record Holder Steve Backley was an OK cross country runner having taken it up because his father was a good XC runner. Who knows what would have happened if he had stuck to it?
- ◆ Propose that if the maths teacher at school says that the child has promise then should the parent ask that they do maths for 6 hours every day and drop all other subjects?

Ray told us about the impact of this format. The first experience of athletics is now much more interesting and enjoyable. This is the feedback from the Under 11 athletes and their parents. They only have anecdotal evidence because the youngsters involved have never had the opportunity to experience conventional competition formats. However it is interesting to note that they had more Under 11s at the County Championships (also Quadkids format) than Under 13s.

They are now seeing an increase in the number of parents taking the Level 1 technical officials courses. For example, Leamington C & AC recently had 6 people on one course who were all parents whose children had competed in the Under 11 League. The Under 13 team managers are reporting that it is now easier to get parent volunteers and most of them are more aware than they used to be.

Why did it work?

- ◆ Admin is minimal. There are two League officials (Chairman and Secretary) and no admin meetings. It helps that the Sec is the area Quadkids coordinator. All done by e-mail
- ◆ The League does not require a lot of technical officials – it is largely self-supporting in that the parents must help (they are not given a choice)

- ◆ The event does not take a lot of time, especially in travel. Parents are committed to an evening only, not a whole day at the weekend. Parents are used to taking children to activities in the evenings or for short times at weekends but they don't like dedicating a whole day at the weekend to a child's activity.
- ◆ Every athlete is occupied for most of the time during the meeting.
- ◆ The meeting reflects the training that the youngsters do. Their training is multi-disciplined and so is their competition. Previously it did not make sense to generalise training but specialise in competition.
- ◆ At a very early age the athletes first experience of competition reinforces their membership of their Club. Every athlete without restriction represents the team.

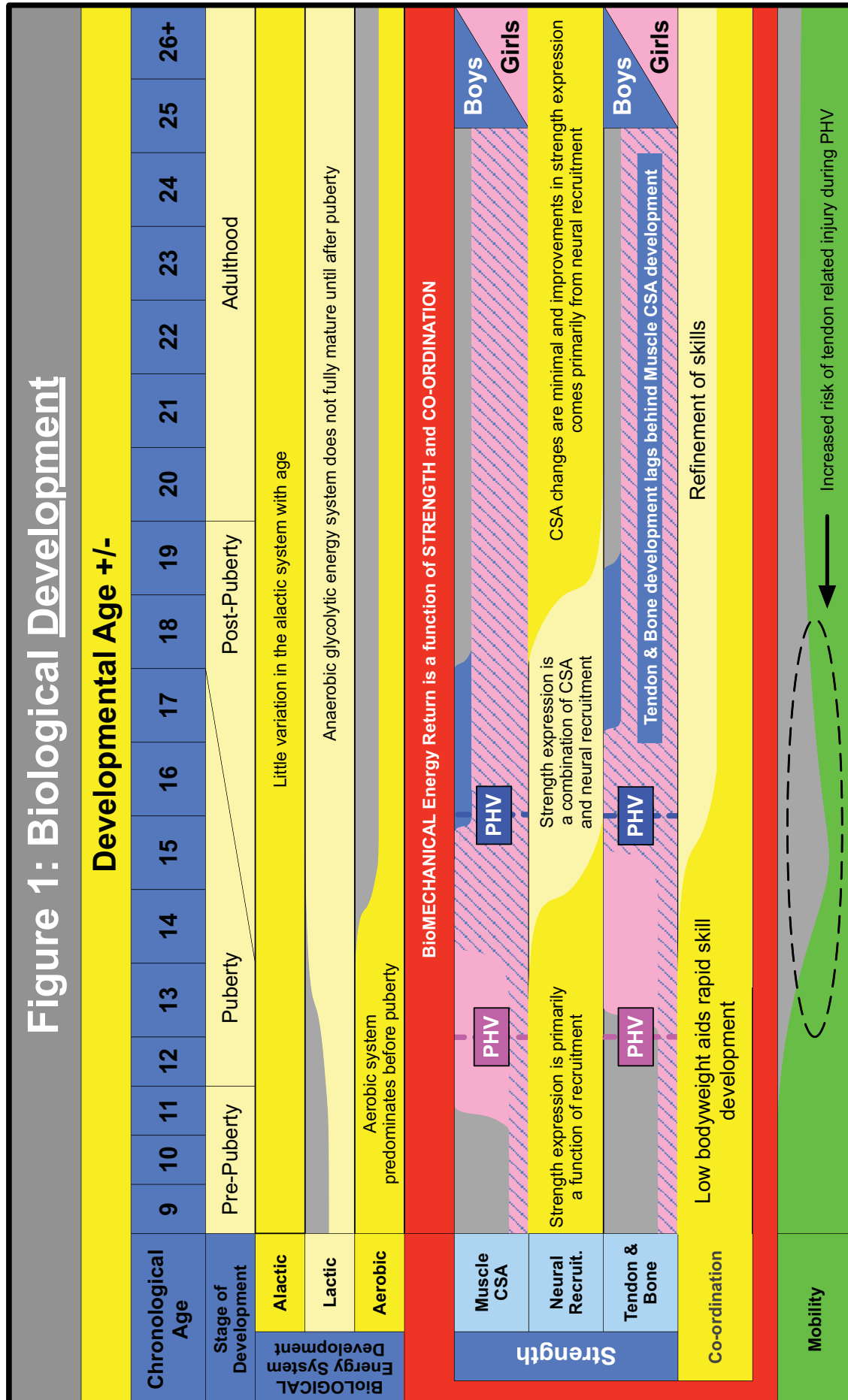
How will the project continue? Funding is the only issue because future grant aid is uncertain. Now that the League is well established the Clubs will have to pay the hosting costs (track hire and first aid) themselves.

Although the League is not restricted to Club members the Network is considering if it should be promoted within the schools Network. Quadkids facilitates that very well.

- ◆ The Network proposes to talk to Quadkids to see if the range of events can be extended to make the events even more interesting. Team relays are a good way of capping off an evening for instance.
- ◆ The Network is considering extending the format to the Under 13 age group. The issue of the range of events is even more important to them. (Super8 could be an option here.)
- ◆ The Network is considering increasing the number of events per season.

6. Appendix 2: UKA Athlete Development Model (V1.2)

These diagrams are for illustration purposes only. They can only be fully interpreted after reading the accompanying notes and audio presentations



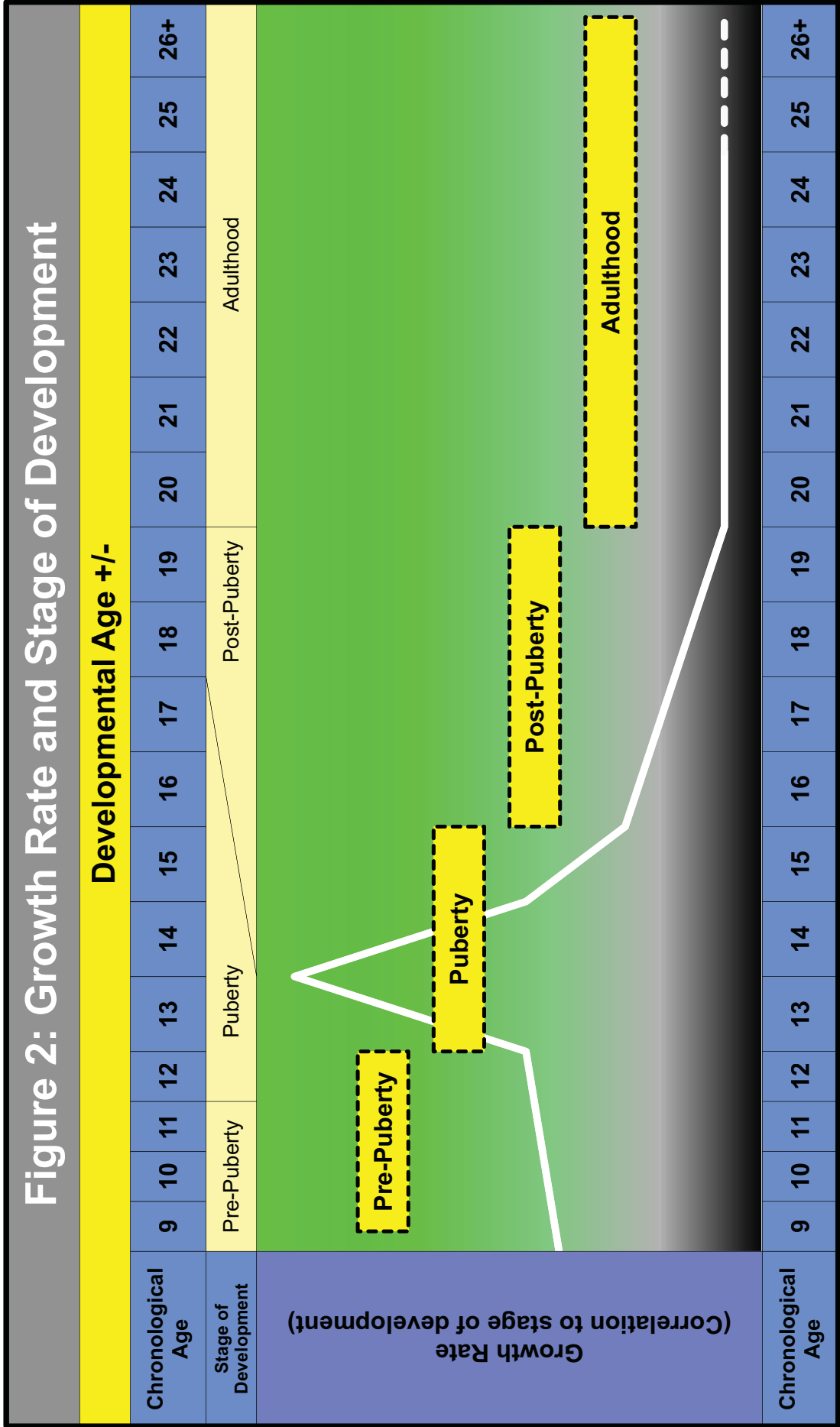
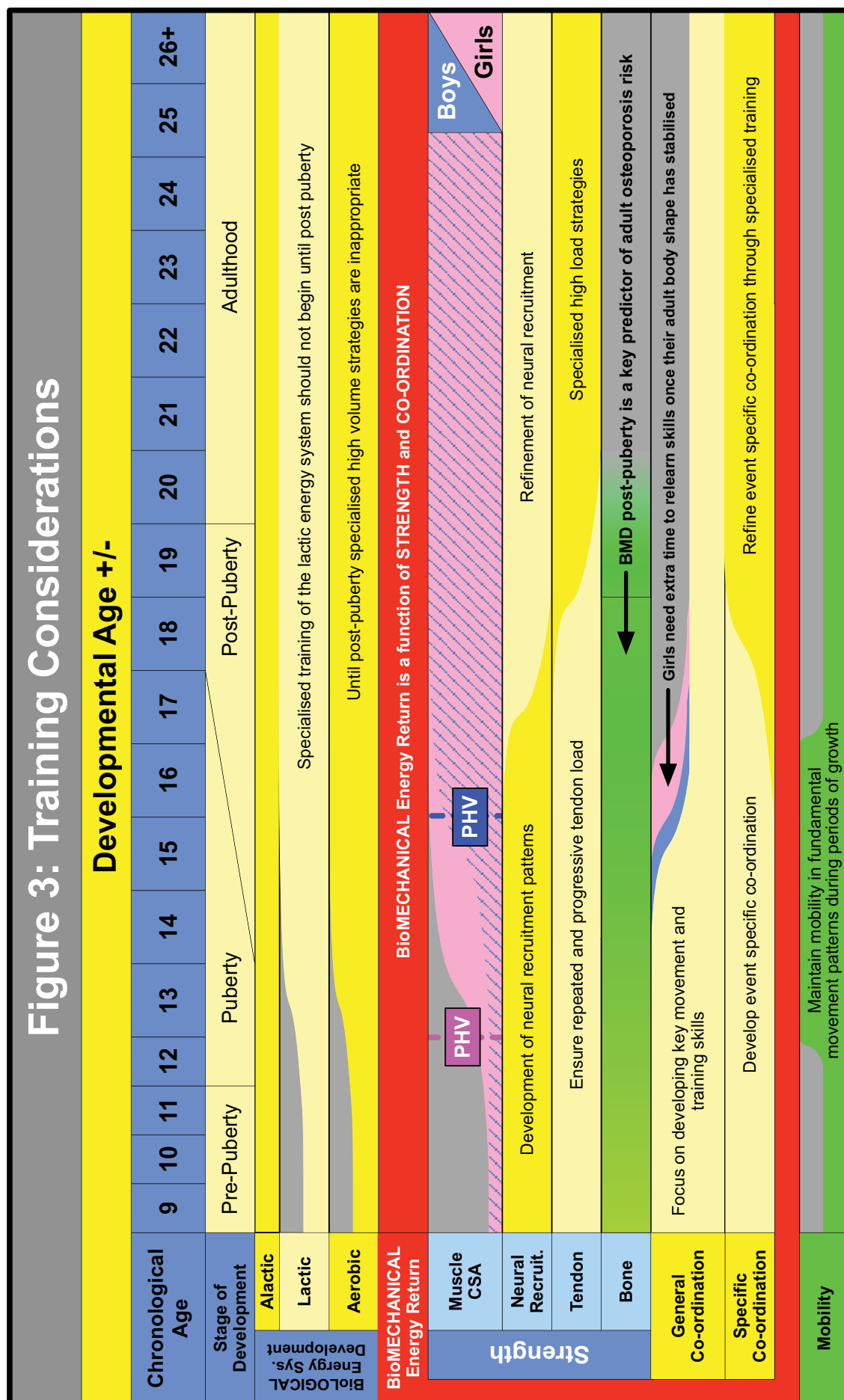


Figure 3: Training Considerations



UKA Athlete Development Model

(continued)

Developmental Age +/-																				
Chrono. Age	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26+		
Stage of Development	Pre-Puberty			Puberty					Post-Puberty					Adulthood						
Education	Primary	Secondary					Further Education	Employment												
		Higher Education/University																		

Figure 4: Training and Competition Requirements

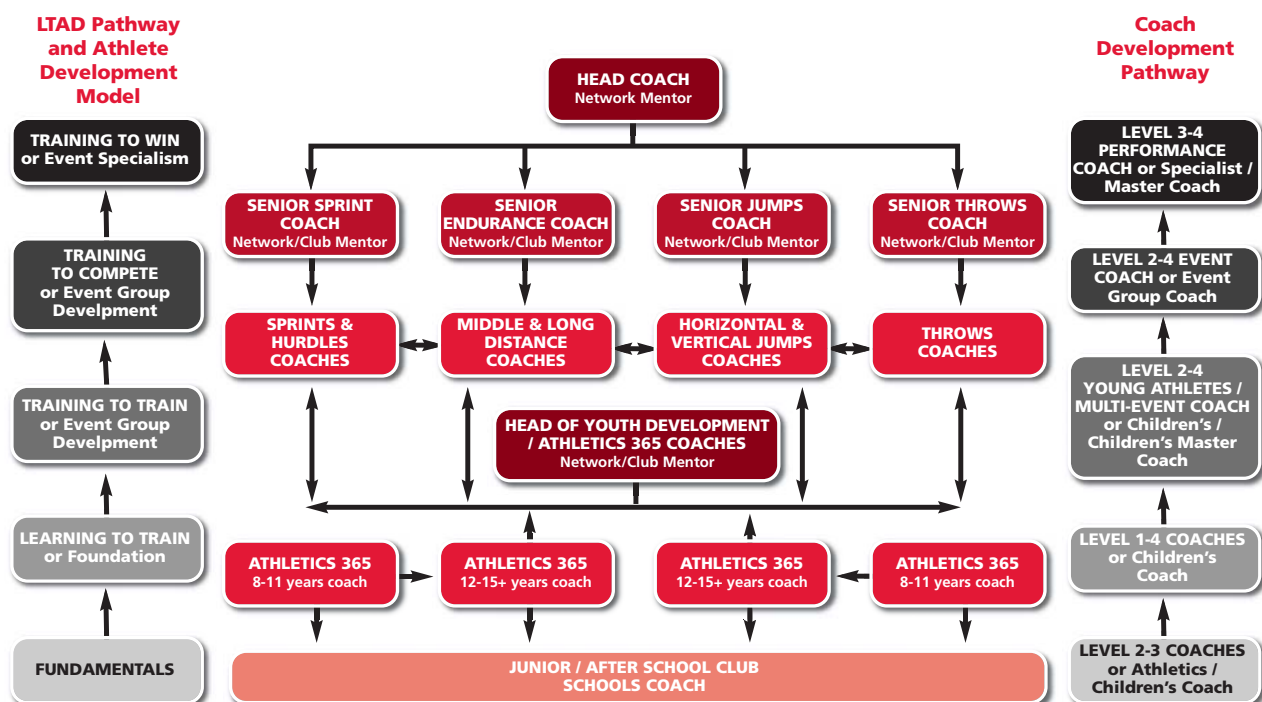
Figure 4: Training and Competition Requirements									
Sports Focus	Multi-Activity		Multi-Event		Event Group		Event Specialisation (inc. Hep/Decathlon)		
Training Freq	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></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Developmental Age +/-																							
Chrono. Age	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26+					
Stage of Development	Pre-Puberty			Puberty								Post-Puberty				Adulthood							
Education	Primary			Secondary								Further Education		Employment									
														Higher Education/University									

Figure 5: Conditioning

Conditioning Strategy		Conditioning goals mainly achieved via technical work		Progression Focus		Performance Focus	
Conditioning orientation		Multi-lateral with <i>emphasis</i> on Unilateral and Contralateral		Multi-lateral incorporating Bilateral power movement patterns		Performance Focus	
Loading focus		Technical Focus		Performance Enhancement Focus		Performance loading	
Exercise Classification Hierarchy	CE	With modified equipment / distances		With modified equipment where appropriate		Performance loading	
	SDE	N/A		Be cautious of activities that compress the spine and avoid excessive repetitive stress		Progressive loading	
	SPE	N/A		Be cautious of activity that <u>significantly</u> compresses the spine		Full range of means	
	GPE	Fundamental Movement Skills		General strength		Full range of means	

7. Appendix 3: Coach Development and Mentoring Support Pathway



The purpose of this structure is to provide an outline of a potential Club Coaching Structure that could provide effective support to both athletes and coaches.

This structure seeks out to provide a clear development pathway and mentoring support structure for coaches while serving the needs and aspirations of those athletes involved within the club. The structure looks at the Long Term Development of both the athlete and coach and the appropriate support structures that should be put in place to ensure maximum impact.

LTAD pathway

The LTAD pathway suggests the appropriate development of an athlete within the club structure, providing the correct training and coaching principles at each stage of athlete's development. Integrating this philosophy will allow the athlete to gradually build the appropriate Fundamental Movement skills, Strength and Conditioning, Psycho – Behavioural and Technical and Tactical appropriate for their age and stage of development. Providing a recognised development pathway will ensure that athletes develop the appropriate physical, mental, technical, tactical skills as a foundation before moving onto more complex skills.

General Enquiries

info@englandathletics.org

T: 0121 7817271

F: 0121 7817371

www.englandathletics.org

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