

## **Supplementary Information**

The Identification of ‘game changers’ in England Cricket’s developmental pathway for elite spin bowling: a machine learning approach.

**The aim of this supplementary document is to present:**

1. Detailed evidence that supports the findings offered in the main paper, divided quantitative and qualitative sections.
2. The quantitative interview schedule.

## Supporting Evidence

### Quantitative Section

**Supplementary Table.** The 93 features of development initially entered into quantitative analysis

Feature Number	Feature Labels
1	Birth Quarter
2	Place of Birth Size
3	# of Siblings
4	# of Older Siblings
5	Age Left Family Home
6	Was Primary School your Principle Place for Sport Practice?
7	Was Primary School a Designated Sport School?
8	Went to a Grammar school?
9	Went to Higher Education?
10	Age Left Education
11	# of Organised Sports Played
12	Age Started Organised Cricket Practice
13	# of Organised Practice Hours up to Age 14
14	Intensity of Organised Practice up to Age 14
15	# of Organised Practice Hours up to Age 17
16	Intensity of Organised Practice up to Age 17
17	# of Organised Practice Hours up to Age 20
18	Intensity of Organised Practice up to Age 20
19	# of Organised Practice Hours Before Age of Senior International Debut
20	Intensity of Organised Practice Hours Before Age of Senior International Debut
21	# of Organised Practice Hours up to First XI County Cricket Debut
22	Intensity of Organised Practice Hours up to First XI County Cricket Debut
23	Age of First Organised Cricket Competition
24	Age of First Organised Spin Specific Practice
25	Proportion of Spin Specific Practice up to Age 14
26	Proportion of Spin Specific Practice up to Age 17
27	Proportion of Spin Specific Practice up to Age 20
28	Proportion of Spin Specific Practice up to First XI County Cricket Debut
29	Age Started Bowling Spin Bowling Overs in Competition
30	Mean of overs bowled up to First XI County Cricket debut
31	# of Cricket Competition Hours up to Age 14
32	Cricket Competition Intensity Hours up to Age 14
33	# of Cricket Competition Hours up to Age 17
34	Cricket Competition Intensity Hours up to Age 17
35	# of Cricket Competition Hours up to Age 20
36	Cricket Competition Intensity Hours up to Age 20
37	# of Cricket Competition Hours up to Age of Senior International Debut
38	Cricket Competition Intensity up to Age of Senior International Debut
39	# of Cricket Competition Hours up to First XI County Cricket Debut
40	Cricket Competition Intensity up to First XI County Cricket Debut
41	Age of First Regular Involvement in Cricket
42	Age of First Involvement Playing Family/Friends
43	Age of First Involvement in Unsupervised Practice

44	Age First Played Organised Cricket vs. Older Kids
45	Age First Thought About Becoming a Professional Cricketer
46	Age of First Regular Training with a Cricket Team
47	Age of First Regular General Fitness Training
48	Age Decision Made to Become Professional Cricketer
49	Age of Specialisation in Cricket
50	Age of Specialisation in First Discipline
51	Age of First Off-Season Cricket Training Camp
52	Relocated to Attend Regular Cricket Training?
53	Age when First had Close Relationship with a Coach
54	Age First Joined a County Cricket Academy
55	Age First Selected for an ECB Training Squad
56	Highest Level of Cricket Competition Representation by Age 14
57	Highest Level of Cricket Competition Representation by Age 17
58	Highest Level of Cricket Competition Representation by Age 20
59	Age of Senior Club Cricket Debut
60	Physical Size when First Played Senior Club Cricket
61	Level of Challenge Encountered when First Played Senior Club Cricket
62	Years Taken to Achieve a First Significant Performance in Senior Club Cricket
63	Years Taken to become the Best Spin Bowler in Senior Club Cricket Team
64	Age of Second XI County Cricket Debut
65	Physical Size when First Played Second XI County Cricket
66	Level of Challenge Encountered when First Played Second XI County Cricket
67	Years Taken to Achieve a First Significant Performance in Second XI County Cricket
68	Years Taken to Become the Best Spin Bowler in Second XI County Cricket Team
69	Age of First XI County Cricket Debut
70	Physical Size when First Played First XI County Cricket
71	Level of Challenge Encountered when First Played First XI County Cricket
72	Years Taken to Achieve a First Significant Performance in First XI County Cricket
73	Years Taken to Become the Best Spinner in First XI County Cricket Team
74	Age Became a Regular First XI County Cricketer
75	Age Became Regularly Involved in Any Unstructured Sport
76	# of Cricket Play Hours up to Age 14
77	Cricket Play Intensity up to Age 14
78	# of Cricket Play Hours up to Age 17
79	Cricket Play Intensity up to age 17
80	# of Cricket Play Hours up to Age 20
81	Cricket Play Intensity up to Age 20
82	# of Cricket Play Hours up to First XI County Cricket Debut
83	Cricket Play Intensity Hours up to First XI County Cricket Debut
84	# of Unsupervised Cricket Practice Hours up to Age 14
85	Unsupervised Cricket Practice Intensity up to Age 14
86	# of Unsupervised Cricket Practice Hours up to Age 17
87	Unsupervised Cricket Practice Intensity up to Age 17
88	# of Unsupervised Cricket Practice Hours up to Age 20
89	Unsupervised Cricket Practice Intensity up to Age 20
90	# of Unsupervised Cricket Practice Total Hours up to First XI County Cricket Debut
91	Unsupervised Cricket Practice Intensity Hours up to First XI County Cricket Debut
92	# of Unsupervised Cricket Practice Hours up to Age of Senior International Debut
93	Unsupervised Cricket Practice Intensity up to Age of Senior International Debut

## Qualitative Section

### Supplementary Details of the Qualitative Data.

This qualitative report identified commonalities and differences between England- and County-level spin bowlers that emerged from responses to questions asked during interviews. The qualitative interview data was obtained from the interview session that were conducted to obtain the quantitative data (described in the manuscript ‘method’ section). The qualitative interview guide was divided into four questions: Question 1 aimed to establish what challenges professional players had to face along their pathway and how they managed to overcome them; Question 2 tried to establish the single biggest influence on the professional spin bowlers’ development; Question 3 aimed to establish if there were any significant learning experiences or key moments during the development of the players’ careers. Question 4 concluded by giving participants an opportunity to add additional information that would be helpful to understand the spin bowler’s journey.

#### 1.0 Question 1a: What were the biggest challenges you had to face along your pathway as a spin bowler?

##### 1.1 Commonalities:

##### 1.1.1 *The challenge of being selected for teams and avoiding being dropped.*

Answers to this question highlight the biggest challenges senior spin bowlers had to face along their pathway as a spin bowler. Analysis revealed that 5 England players and 5 County-level players contributed similar quotes to the node; highlighting that the biggest challenges both England and County-level spin bowlers had to face during their development were getting selected for the team, and avoiding being dropped from the team. Since these quotes were equally and substantially represented across both England and County players we consider this theme to be a commonality across the two groups.

**1.1.1.1 *Quotes from England-level spin bowlers:*** The quotes below come from 5 England spin bowlers highlighting ‘*selection*’ and ‘*avoid from being dropped*’ as the biggest challenges the players had to face along their pathway.

The biggest challenge for 3 England players was to get selected for the team:

P 16: “I suppose the biggest challenge was trying to get picked to play, but then I overcame it by working hard, practising hard. Same with the spin really, get selected, then just work harder and harder. So generally, I just worked harder. The biggest obstacles I suppose were then getting used to getting dropped”.

P. 20: “The biggest challenges for me were getting a regular place in the team. Part of that was driven by the changing nature of the game in terms of seam bowling become more prevalent in the game, shall we say?... There’s that element to it there, and also just the challenge of trying to get yourself into the position of number one spin bowler at the club so that you played all the games”.

P 7: “I think, not getting selected, just created the hunger more for me. Like, failing”.

The biggest challenge for 2 England players was to avoid from being dropped from the team:

P19: “Biggest challenges? I found bowling spin easy. It came easy to me when it happened. I didn’t find it difficult. I think the hard times were playing, as I was evolving as a cricketer, and going up and playing each level, the cricket got tougher. They were the challenges. In developing to survive and perform at every level that you play, and getting there. Sometimes you would get there and all of a sudden your progress would stop, and you needed to play at that level for a while before you actually started to move up again”.

P 21: “The biggest challenges were, being over-coached, lack of form, and getting dropped”.

**1.1.2 Quotes from County-level spin bowlers:** Similar to the England players, 5 County-level players indicated that getting selected, and being dropped from the team were some of the biggest challenges they had to face during their development.

Three County-level players mentioned that it was difficult to get selected, as there were many good spin bowlers competing against one another for a place on the team:

P 29: “What were my biggest challenges? Dealing with not getting selected. I said earlier about being the second spinner often, so being not selected would happen quite a few times, even when you thought you should be. You know yourself that you were bowling really well, but in that period, the wickets might not be quite right and you get left out. You'd miss out on playing for a bit, and you'd lose your bit of form”.

P 25: “The biggest challenge for me back then was that there was so many of us. There were quite a few spin bowlers. It wasn’t the fact that I didn’t believe in myself. There were a lot of us and fighting for places back then was tough. It was a big mental challenge to get through it”.

P 23: “Then go on to professional staff and we had too many spinners on the staff, really. We shared development, is how I viewed it, looking back. That would be the biggest challenge”.

One County-level player recalled that it was difficult to get selected for the team, since he was not a good all-rounder cricketer:

P 30: “The biggest challenges – I was a specialist. I didn’t bat and I was a really average fielder, so I was either bowling well or I wasn’t in the team. So that was the challenge, that sense of being a bit of an artiste, you know, a luxury player;

you're known as the second spinner a lot. So that was that. So not being a good enough all-round athlete and not offering anything with the bat".

Whereas, 1 County-level player mentioned that as soon as he showed signs that he was feeling weak or struggling he would be dropped from the team. Subsequently, he ended up pretending that everything was fine in order to keep his position in the team.

P 24: "I was struggling with bowling, like a senior coach, or a coach or a player. Sometimes you feel weak or something and you would get dropped. Sometimes, you are better off just to say nothing, and not get dropped. Try and bluff your way through it, as it were".

## **1.2 Additional answers – England-level spin bowlers:**

The following quotes are additional answers to the question relating to the biggest challenges professional players had to face along their pathway as a spin bowler. Six England players identified challenges along their pathway as being: not having necessary guidance and support; playing against older men from an early age; wanting to play cricket in a rugby dominant area; and getting oneself into the number one spin bowler position.

**1.2.1 *Insufficient guidance and support.*** The biggest challenge for 2 England players was not to have sufficient guidance and support when they needed it the most.

**1.2.1.1 *Quotes from England-level spin bowlers:*** P 17: "The biggest challenges were when things were going wrong, and you needed help, and often there was no help available. You'd got to bowl and bowl and bowl until you felt it was going better, and often that was not a good thing because you can bowl and bowl and eventually you get tired and bad habits start developing. So that was a hard part, getting somebody who knew enough about spin bowling to help you through a situation when the balls aren't coming out right, it's not spinning or it's not... You were basically on your own for too many moments".

P 16: "I suppose the obstacles were not knowing my game, because I just did it, and nobody taught me how to understand my game".

**1.2.2 *Playing against older men from an early age.*** Two England players perceived playing cricket against older men from an early age as one of their biggest challenges along their pathway:

**1.2.2.1 *Quotes from England-level spin bowlers:*** P 21: "Being put in men's cricket at young age and getting slogged around. Playing on small grounds in league cricket. You've just got to become more resilient, you've got to bat yourself, you've got to practice more. Playing first-class cricket, playing on very

good wickets against better players and learning to adapt to conditions and things like that”.

P 18: “Playing against men at an early age, and good seriously good players that. Like I say, 30+, played a lot of cricket. Yes, so overcoming that through doing it”.

**1.2.3 *Playing cricket in a rugby-dominant area.*** One England player recalled that the biggest challenge for him was to say that he wanted to play cricket. This was especially challenging, as the player grew up in an area where rugby was a more dominant sport.

**1.2.3.1 *Quotes from England-level spin bowlers:*** P 22: “As in choosing cricket ahead of rugby? That was it, yes. As in, sort of, saying to where I lived that I wanted to play cricket, not rugby. That was it, yes. Not to say that I would have been a proper rugby player but everybody where I lived expects you to play rugby and why play cricket?”

**1.2.4 *Working towards the number one spin bowler position.*** A particular challenge for 1 of the England players was to get himself in the number one spin bowler position, as he not only wanted to play at all the matches, but he also had the desire to improve as a bowler.

**1.2.4.1 *Quotes from England-level spin bowlers:*** P 20: “There’s that element and also just the challenge of trying to get yourself into the position of number one spin bowler at the club so that you played all the games. As a consequence of that, you got the bowling opportunities and the overs to justify your existence and get better”.

### **1.3 Additional answers – County-level spin bowlers:**

Four County-level players identified challenges along their pathway as being: logistical problems; limited access to facilities; not having the necessary guidance; and playing against world-class players.

**1.3.1 *Logistics and financial constraints.*** Logistics and financial constraints were identified as being two of the biggest challenges by 1 County-level player.

**1.3.1.1 *Quotes from County-level spin bowlers:*** P 28: “My biggest challenges were obviously the area that I lived, and logistics. Logistics would have been a huge obstacle for me, finance would have been a huge obstacle. My father ended up being a taxi driver. I used to have to travel by bus and an over-ground train at a young age to try and play cricket, with not a lot of money. The environment I lived in. Not many people played cricket. Therefore, there weren’t that many connections. What other obstacles were there potentially? I’d have said they’d have been my biggest players”.

**1.3.2 Limited access to training facilities and lack of guidance.** Limited access to training facilities to practice, and not having guidance on what it takes to become a professional cricketer, were some of the biggest challenges 1 County player endured.

**1.3.2.1 Quotes from County-level spin bowlers:** P 26: “I think the biggest challenge was having to know what it took to become a professional cricketer. The structure I went through, it wasn't like a private school where you had all the facilities. My structure was more state school, get on with it sort of thing. If I'd known earlier what it took, if I'd had the facilities to practice what I wanted to back then, I reckon it might have started sooner. The biggest challenge was, basically, facilities and trying to get access to them”.

**1.3.3 Challenges of bowling in competition.** Playing against world-class cricketers proved to be very taxing for 2 County-level players. For 1 County player in particular, it was overcoming the mental aspect of playing against some of the best players in the world.

Whereas, 1 County-level player recalled that it was challenging for him to bowl as the second spinner in the team, especially in instances where the batsmen had already established a firm base:

**1.3.3.1 Quotes from County-level spin bowlers:** P 25: “I think it's getting over who you're bowling against. Like you say, you hear about people and the names that are in world cricket and then next week you are playing against them. You're there, you might be batting or bowling against Brian Lara. You've got to overcome that mental aspect of, “He's one of the best players in the world,” or, “He's the quickest bowler in the world.” You've got to switch on and say, “It's good. If I can get him out then that makes me a half-decent bowler.” It's that challenge, it's that thing of, “I want the ball, I want to get him out.” That was the challenges that you face, that every week you are two or three world class bowlers in every side and you had world class batters in every side. Now you don't get it so much because overseas pros don't come over so much or you might have one. Whereas back then you had two bowlers or two or three batters that were quality. Yes, it was a good challenge but it was nice to overcome them and do well at it at times”.

P 29: “Well, playing against good players, that was always a challenge, as well as captains not bowling you in times when the odds were always stacked against you. Often, spinners would come on, happened a lot, especially as being massively the second spinner. By the time I came on, batters often were set, ready to go, yes, might have 80 or 90 to their name, or you would bowl at the end, that wasn't as good a place to bowl spin as another end, because you were the second spinner”.

## **2.0 Question 1b: How did you overcome these challenges?**



## 2.1 Discriminators:

**2.1.1 Overcoming challenges through hard work and practice.** The answers to this question describe how some professional spin bowlers managed to successfully overcome challenges, and how other professional spin bowlers failed to overcome those challenges. Thematic analyses of the quotes revealed three sub-themes, namely, overcoming challenges by seeking and listening to advice, overcoming challenges through hard work and practice, and difficulties in overcoming challenges.

This sub-theme reflects professional spin bowlers' ability to overcome challenges through hard work, practice, and by bowling on various pitches. Analyses revealed that 7 England players and 3 County-level players contributed comparable quotes to this sub-theme. Since the quotes provided were almost double the proportion of England players relative to County players, we interpreted these results as a differentiator. Suggesting, England spin bowlers were more likely than County-level spin bowlers to have overcome the development challenges they faced by engaging in hard work and practice.

**2.1.1.1 Quotes from England-level spin bowlers:** Seven England-level spin bowlers recalled that they managed to overcome challenges through practice, hard work, and by bowling on various pitches:

P 16: "I suppose the biggest challenge was trying to get picked to play, but then I overcame it by working hard, practising hard. Same with the spin really, get selected, then just work harder and harder. So generally, I just worked harder".

P 20: "Okay, you'd overcome them by working hard and practising in the net to try and make yourself better. You'd overcome them by trying to bowl as best you could in Second Team cricket, so you'd try and force your way into the side. Also try and bowl as best you could in First Team cricket as well so that you kept your place in the side".

P 22: "I got hammered by one batsman and then my father had a chat about line and pace. I bowled too slow and I bowled too straight. We practiced for hours and hours and I managed to take what I'd practiced into the game. I got the lad out early on, bowled the way that I practiced and it was successful, so the penny dropped. Success from the practice".

P 6: "Bowling and bowling, and getting to know about bowling. Getting to know about your body".

P 17: "You've got to be stronger now than I think you used to. Not strong as in you can run fast, you've got to be strong in the shoulders so you can bowl for long period if necessary. But how are you going to do that if you don't practice bowling. If you don't practice bowling on pairs you can't suddenly bowl 40 overs in a day because you've never done it".

P 21: “Using different sized balls when you’re practising, using little win balls when you’re a young kid. Trying to hold it differently. What else? Just being patient with thinking that you’re going to grow, so you just had to be patient”.

P 19: “It takes time to develop, A, your skills in terms of control. Learning to bowl on the various pitches that you’ve played on. The consistency, flight, pace, length, line. All the basics. It’s not until you nail those down and become consistent, and you are confident that you can bowl that ball into the area that you can”.

**2.1.1.2 Quotes from County-level spin bowlers.** Similar to the England players, 3 County-level players indicated that they managed to overcome challenges through hard work.

P 29: “I’d say the way I dealt with that most of the time, well, sometimes was to get grumpy, irritable, pissed off and blame other people. I guess when I wasn’t doing that, just work harder to get better, very simply”.

P 26: “You’ve got a bat and ball and you’ve got a wicket laid out, so get a grip. Get a few mates and just practice.” Quantity rather than quality. That was the best of the situation I had to make out of it, rather than having a really good indoor school that I could ring up and go and get coached. I just had to make the best out of what I could. At a young age I realised that putting in hours would be the best thing for me to get better”.

P 25: Just to be confident in what you do and just have that mentality of, “Right, I’m going to spin the ball and I’m going to be really focused on what I do.” Practice well, train well.

**2.1.2 Difficulties in overcoming challenges.** One sub-theme that was unique amongst County-level players was experiencing difficulties in overcoming development challenges. Some of the difficulties forwarded by County-level players to successfully overcome development challenges include but are not limited to: nervousness about performance, fear of failure, not equipped to cope with high-level expectations, and lack of support/help.

**2.1.2.1 Quotes from County-level spin bowlers:** The following quotes are from 6 County-level spin bowlers indicating difficulties they experienced in overcoming challenges.

One County-level player mentioned that he was not equipped to cope with high-level expectations and pressure:

P 27: “Then you start to learn the game and you realise that as a spin bowler you need to be pretty accurate, you need to be only going a three runs and over maximum let’s say in the first innings and then get your wickets in the second innings. With that understanding there comes expectation and pressure you put on

yourself and again that causes crunch points. I wasn't equipped to deal with those crunch points".

Another County-level player admitted that he did not manage to overcome challenges, as he was nervous about his performance, and had a fear of failure:

P 23: "I'm not sure I ever really did [overcome those challenges]. Looking back, there is part of me that loved the challenge of playing and loved the moment. There is also lots of nervousness about performance and fear of failure. I was always trying to find something else to get better. I did, in some ways, because I was like, "Right, I'm going to find my own path and go away and pursue it." Equally, I need some people to help me, you know, looking back".

One County-bowler acknowledged that he was unable to successfully overcome his challenges even though he was a good bowler, and had some good performances. However, there were other bowlers who were just as good as him with the ball, but who had more to offer with regards to batting and fielding:

P 30: "No, I never really overcame these challenges. I mean, I was a pretty good bowler and had some good performances, but I didn't do like [X] did: he would get 80 wickets at county season and things like that – that was the era then, and you know, I was a 50 wickets a season spin bowler, when we played more and things like that, in a field of people that did better than me. Did better than me, generally, or offered a bit more with the bat as well as being as good as me with the ball and things like that. I was pretty good, I was a pretty good county cricketer, but I was no better than that, really".

One County-player was of opinion that if he had received the necessary guidance / help earlier on during his development, he would have started sooner in First-Class cricket:

P 26: "I think the biggest one was having to know what it took to become a professional cricketer as, you see, the structure I went through, it wasn't private school and you had the facilities and all that. My structure was more state school, get on with it sort of thing. If I'd known earlier what it took, if I'd had the facilities to practice what I wanted to back then, I'm not sure because I've made it into first-class cricket now, but I reckon it might have started sooner".

It was also argued by 1 County-player that if one practices without the necessary guidance, one is not necessarily going to improve:

P 27: "Yes, so my philosophy was the more balls I bowled, the better I would become. I think it's a decent attitude to have but it needs guidance because if you're not practising the right things, you're not necessarily going to become any better. I think that was the case with me, I had a massive desire to be better. I was always one of the fittest cricketers on the staff, I always bowled the most balls but the unstructured practice I think was significant".

One spin bowler thought that he would have progressed quicker if he had had more help:

P 24: “I didn’t really progress as quick as I probably could have done, if I’d have had a bit more help like they do nowadays”.

## **2.2 Commonalities:**

**2.2.1 Overcoming challenges by seeking and listening to relevant advice.** This sub-theme reflects professional spin bowlers’ recollection on how they managed to successfully overcome challenges by seeking advice or feedback from experienced bowlers and coaches. However, the spin bowlers would filter out any unnecessary information, only to take away information that has relevance to them. Analyses revealed that 6 England-level spin bowlers and 4 County-level spin bowlers contributed quotes to the sub-theme. Since the proportions of England and County-level players who contributed quotes to the sub-theme are broadly similar, this sub-theme was considered to be a commonality across the two groups of players.

**2.2.1.1 Quotes from England-level spin bowlers:** The following quotes come from 6 England-level spin bowlers, recalling how they managed to overcome challenges by seeking out and listening to advice; thereafter, they would only select and use relevant information that they felt would be pertinent to them:

P 17: “Finally, the member of the team who knew a bit about the game, you’d talk to them a lot. I would talk to [X]. He would say, “You might be going a bit slow, you’re bowling a bit quickly. You’re not putting enough energy into it”. So I’d be learning on my own a bit, asking questions and just searching”.

P 22: “Trying to get as much feedback as possible from other people. Try and pick good sources. Work with wicket keepers but generally from the coach”.

P 21: “[X] who I’ve said was my mentor from a young age, I would phone him up, getting back to doing the basics. Using a sports psychologist. Yes, little things like that I suppose”.

P 2: “If I was asked the question from a young fellow now, who was 16, I would say, you have to be your own Coach, you have to work things out for yourself. Use the eyes and ears, and knowledge of a Coach, but ultimately, you’ve got to know what direction you’re going in. Because I just believe Coaches that are talking to spinners will always have information, that most of it, its relevance to that individual is minimal”.

P 3: “I ignored the Coaches basically, all along, and I didn’t hold the ball as they suggest you should. Because I found that it didn’t work very well. That was from the age of about eight onwards. So I ignored conventional wisdom, when it came to off spin bowling. I thought off spin could offer a hell of a lot more than was accepted as the sort of output that spinners should give in England”.

P 4: “It’s the same for the coaching, is that, I think early on when you’re young, you listen to too many voices. Without filtering it out and working out, and as you

get older you pay lip service for things and you say, “Thanks very much,” because everyone means well”.

**2.2.1.2 Quotes from County-level spin bowlers:** The following quotes were taken from 4 County-level spin bowlers recalling how they managed to overcome challenges. Similar to the England players, County-level players would listen to advice from coaches, then filter out any unnecessary information, and only retain that what has relevance to them:

P 27: It’s still knowing who to trust as coaches and what information to take on board but always to be accountable. Also, trust as well. Which coaches you could trust. everyone would have an opinion and it was trying to make sense of what was right and what was wrong. You’d try all sorts of things but essentially, I was scrambling trying to find a method to make me a better bowler”.

P 24: “It’s just you got to have to belief in yourself. Yes, you’ve got to have a plan and an end goal to reach for. Don’t try and please everyone. When one coach says, “Oh, this is the way we do it”, don’t try and please him if you don’t believe him. I know it’s easier said than done. Take everybody’s advice, or look like you’re listening to people. I might talk sh\*t for half an hour, but then I might say one sentence and you think, “I will use that”. Bring that into your game and don’t be shy about getting advice. Not taking it, but maybe just use snippets”.

P 25: “I had the mentality of not switching off but filtering what people said to me. You can quite easily go down the road of pleasing everybody. I’m not saying, “What I say is right all the time,” but I’m saying, “Try what I say. I’ve got no problems if it doesn’t work for you but try it. If it does, brilliant; if it doesn’t, then move onto the next thing. Don’t try and take in too much all the time. Just have the confidence to try and do what you do and that’s spin the ball”.

P 29: “Be good at working out what works for you, and what’s right for you. That is massively an important underrated skill for any cricketer, especially a spinner, because you’ll get some rubbish advice. Take on advice, but be good at sifting out what’s good and what will work for you. Always believe in what your strengths are what makes you work well, bowl well, and don’t err from that”.

### **2.3 Additional answers – England-level spin bowlers:**

The following quotes are additional answers to the question relating to how professional players managed to overcome the challenges along their pathway as spin bowlers.

**2.3.1 Moving Counties to gain more bowling experience.** One England player recalled having to move twice to different Counties to gain more bowling experience because his progress within team was hindered by better bowlers within the team,

**2.3.1.1 Quotes from England-level spin bowlers:** P 20. “I also changed counties twice. At XXXXX where I started my career, my pathway was blocked by [X] who was a really fine off spin bowler. He played for England and he was a real

quality bowler, so I learned a lot from him. It was great to play with him but I got to a stage where I wasn't playing anywhere near as much cricket as I felt I ought to or would like to do so I moved county. I moved and played pretty much a full season, particularly in the Championship cricket and went pretty well. Then we got into the era of high seamed balls and green pitches and I was marginalised. After three years I then moved to another County, where things progressively got better as the pitches were a little bit more favourable with spin bowling, so you got more of an opportunity there”.

## **2.4 Additional answers – County-level spin bowlers:**

**2.4.1 Lifestyle changes.** One County-level player had to make certain life-style sacrifices, as well as train harder to overcome the challenges of being a professional cricketer.

**2.4.1.1 Quotes from County-level spin bowlers:** P 24. “A thing to overcome was trying to get used to being a professional, is a different kettle of fish. Saying no to my mates, not going out nightclubbing, boozing every night or doing whatever they did. As a young kid, growing up, you make sacrifices. Training a lot, going to different camps, driving here there and everywhere”.

## **3.0 Question 2: What had the single biggest influence on your development as a spin bowler?**

### **3.1 Commonalities:**

**3.1.1 The influence of significant others on spin bowling development.** Answers to this question reflect England and County-level players' perception of the single biggest influence on their development as a spin bowler. Analysis of the interviews indicated that significant others (i.e., family, captains, and coaches) had a considerable influence on the spin bowlers' development. In total, 8 England players and 6 County-level players contributed comparable quotes to the theme. In light of the substantial proportion of both groups of spin bowlers who identified similar influences, we considered this theme to reflect a considerable similarity between the two groups.

**3.1.1.1 Quotes from England-level spin bowlers:** The following quotes come from 8 England-level players identifying captains, coaches, and family members as being the biggest influence during their development as a spin bowler.

Five England players identified team captains or coaches to have had a considerable influence on them during their development:

P 19: “Captaincy, without a doubt. Having a good Captain who understands spin, allows you to develop as a spin bowler, not rushing you, giving you the overs. I think the structure that we probably play now is certainly a lot tougher for young spin bowlers to come into, and through, because of the type of cricket played and divisional cricket”.

P 17: “Well the biggest influence was the guy next door to me, my coach. He was the one. Then the ability to talk to all the great spin bowlers in the country. [X] was probably the best. So when we played him, I would say to him in the bar, “What did you think today, [X]?” And he might say, “Yes, you looked good today. You might push it through a bit more, or you might do-” They would be watching me bowl and all the opposition spinners, they’d watch you and then sometimes they’d give you help and that. That doesn’t happen anymore”.

P 21: “[X] I reckon. Yes, and actually getting someone who bowled spin and who played for England. Listening to him and him taking a huge effort into putting some work into me”.

P 16: “I suppose being encouraged. Like I said, I didn’t receive encouragement specifically, but I was encouraged a lot by a couple of old spinners. A guy called [X] at the club, a cricketer who played for England, and also a guy called [X], ex-England. They were my coaches so they encouraged me”.

P 1: “I think the strong influences are important, so the family influence. I was almost immersed in a cricket environment from very early on, but there was far more than that, so a lot of unstructured play, just catching, hitting, bowling, and at that early age, a very, very good coach, who was a hard taskmaster but very knowledgeable”.

Three England players identified family members who had knowledge or played cricket themselves (e.g., father, brother) to have had a considerable influence during the players’ development as a spin bowler:

P 18: “He [my father] was a slow bowler as well. Although, once you get into your teams you don’t talk so much to your father. Being able to genuinely talk cricket and spin bowling to him, daily, sometimes without even knowing it, you know? It was pretty important. I think that nurturing thing, of having senior people, trusted senior people who were around that would give a young guy opportunity, is huge. We used to play a lot of time cricket, you know, those midweek games when I used to go out of school, nip there, get there at 3 o’clock or whatever”.

P 22: “It was probably my father. He was the first one who told me a good line to bowl and emphasised the importance of bowling a good pace, so that was that”.

P 8: “I think family background is quite, we kind of briefly maybe mentioned it, but I think having an older brother who I did a lot of training with and talking about cricket, was, yes, was pretty essential, I can say that. And the other thing is having parents who are, have the capacity to travel and to drive and time to take you to places; that is huge”.

**3.1.1.2 Quotes from County-level spin bowlers:** Similar to England-level players, 6 County-level players also identified captains, coaches and family members to have had the biggest influence on their development as a spin bowler.

Four County-level players identified their coaches or captains to have had a considerable influence on them during their development:

P 30: “The captain at the club when I was a kid, you know, playing cricket, he thought I was a good player and had thought I could play for a living, like, genuinely thought it. You know, you can see it in somebody’s eyes. And then winning the sort of trust of [X] here as Captain, [X] as a captain ... And then, later on [X] who was a sensational coach, again, for a period of time really, really helped me no end and helped me make sense of what bowling is and things like that, “This is what you have to do.” I’d say that was it, really”.

P 28: “I’d probably say invited to Lord’s and practising under the guidance of [X]”.

P 29: “Well, the moment when [X] said to me, “You’re going to be too little, you’re never going to be able to bowl quick. What are you doing bowling seamers? You’re a little midget. You need to bowl spin. I think you can bowl spin, probably.” Making that move at 14 to start bowling spin, probably that’s the biggest thing. Yes, that’s the biggest thing”.

P 26: I think the massive one was one we discussed earlier. When I was 21 I had to make a choice whether to drop cricket or carry on, but then drop the workforce or the work environment. I didn’t want to really make that decision that quickly, so I was fortunate I’d got Uni to fall back onto. That still allowed me 2 years where I could still choose doing both and then it was just a toss of the coin when [X] called me up saying, “Look, we want you to train with us.” From there it just really kicked off, so I guess that was one of the biggest stages of my career”.

Two County-level players felt that their fathers were the biggest influence during their development as a spin bowler:

P 25: “Been the single biggest influence? Probably my dad, telling me at 11, quite brutally, as much as I didn’t like it at the minute at that point, telling me, “I think you are better bowling in spin.” probably changed me from a medium paced spin bowler at 10, 11, to a spin bowler and saying, “You might have a career in cricket, you might not.” It probably made me play for 20 odd years, that I have done as a cricketer and not done something else”.

P 24: “It was sort of my dad saying at 11, “Do spin bowling”.

**3.2 Additional answers – England-level spin bowlers:**



Two England players identified influences on their development as a spin bowler as being: receiving the County cap in recognition for maintaining good performance over a period of time; and being selected for 4-day cricket provided an opportunity to learn new skills and hone basic skills.

**3.2.1 Receiving recognition for good performances.** One of the biggest influences for 1 England-level player during his development as a spin bowler, occurred when he was awarded the County cap in recognition for maintaining good performance over a period of time.

The following quotes are additional answers to the question relating to professional cricket players' perception of the biggest influence on their development as a spin bowler:

**3.2.1.1 Quotes from England-level spin bowlers:** P 20. "I suppose one of the things that helped me along the way was when I was awarded my County Cap. A County Cap you have to earn by playing regularly and putting in solid performances over a period of time. I was awarded my County Cap and that was a big confidence boost and it gave me the feeling of, Yes, I've got somewhere. I've got a long way to go but I've got somewhere".

**3.2.2 Opportunity to compete in 4-day (red ball) cricket.** Not being selected for one-day cricket but for 4-day cricket had a considerable influence on 1 England player, as it provided him with an opportunity not only to hone his basic skills, but to learn new skills as well.

**3.2.2.1 Quotes from England-level spin bowlers:** P 21. "That's one of the big things that helped me. I didn't get selected for Yorkshire in one-day cricket, I got selected for Yorkshire in four-day cricket. It gave me the opportunity to learn the skills and hone basic skills such as spinning the ball hard, flight in the ball, setting field and working out tactically how to get a batsman out.

### **3.3 Additional answers - County-level spin bowlers:**

Three County-level players identified influences on their development as being: the first time the player could spin the ball past international players; playing for a club that provided him with the opportunity to develop different styles of bowling; and receiving rewards along one's development pathway.

**3.3.1 Bowling against international-standard batsmen.** For 1 County-level player, one of the biggest influences during his development was when he managed to spin the ball past international players. That experienced encouraged him to become a professional cricketer.

**3.3.1.1 Quotes from England-level spin bowlers:** P 27. "It's really hard because I had such an odd career. I think bowling at international players when I first started being around and being able to spin the ball past them that said to me, "Yes I can do this." That was I guess the thing that really got me going".

**3.4.1 Performance expectations.** One County-level player recalled that one of the biggest influences on his development as a spin bowler was when he went to play for XXXXX club. There he was able to bowl many overs, and in the process, develop different bowling styles.

**3.4.1.1 Quotes from England-level spin bowlers:** P 23. “I think, when I went to play for XXXXX. Instead of being the best spinner or one of the best spinners, I was the best bowler there. It was like, “Well, we are paying you a few hundred quid, here is the ball, don’t care if it’s a green pitch, flat pitch, spinning pitch, you’ve got to win us the game.” I ended up bowling lots of overs. The standard wasn’t as good, but some of them were good. Even then, I used to get people out on wickets that were not conducive or assisting you. I developed my bowl. Loads and loads of bowls, and had to develop different styles of bowling”.

Being rewarded along his development pathway had a considerable influence on 1 County-level player as it provided him with a gauge where he is at and what he needs to do to progress to the next stage:

P 26. “Obviously getting rewards as you go along helps, but for me, massively, the biggest reward was making my debut, going on to winning the T20 finals, going to India and experiencing the championship there. Another reward was obviously getting selected for my reward, consistent performances in country cricket and to represent the PEPP (Potential England Performance Programme). I guess if you're rewarded for your hard work and performances, I guess that's like a stepping stone as you know where you're at and what needs to be put in to go to the next stage”.

#### **4.0 Question 3: Was there a significant learning experience / key moment that took place during your development that eventually contributed to the career you had?**

##### **4.1 Commonalities:**

**4.1.1 Conversations with fathers or coaches.** Answers to this question highlight key moments during professional spin bowlers’ development that eventually contributed to their careers. It was interesting to note that both England and County-level players recalled conversations with fathers or coaches as being a key moment, and not a specific achievement event. Results revealed that 3 England players and 3 County-level players contributed similar quotes to the theme. Since the two groups were equally represented in contributing to the quotes, but fewer than half the players in each group provided them, we adopted the view that there was some similarity between the two groups.

**4.1.1.1 Quotes from England-level spin bowlers:** The following quotes are from 3 England-level players recalling a significant key moment that contributed to their careers.

A key moment for 1 England-level player was when he received advice from his father after a poor bowling performance against a particular batsman during a match:

P 22: "...[T]he one thing which was sort of an eureka moment was when I played against a team in the summer when I was about 13. I got hammered by one batsman and then my father had a chat about line and pace. I bowled too slow and I bowled too straight. We practised for hours and hours and I managed to take what I'd practised into the game. I got the lad out early on, bowled the way that I practised and it was successful, so the penny dropped".

One England player recalled that the key moment for him was when his teacher/coach encouraged him to bowl spin after observing him bowl a spin ball:

P 19: "I think that teacher when I was 12 years old, when I made a ball spin and he said, "Do that again." I spun, and he said, "Well that is all you should do. That's how you should bowl. That's what you should bowl." That for me was a key moment".

Whereas, for 1 England player, the key-moment came when a new coach not only provided him with an opportunity to bowl, but the coach also said that he rated the player higher than any of the other bowlers:

P 21: "A new coach coming into the club probably kicked off my career. If we would have had the same coach, I don't think I would have got the opportunities that I got when he came. That was a huge confidence boost for me for a new coach to come and say, "No, I rate you more than the other lads even though they're 3, 4 years older than you." That was a huge thing".

**4.1.1.2 Quotes from County-level spin bowlers:** The following quotes are from 3 County-level players recalling a significant key moment that contributed towards their careers.

A key moment for 1 County-level player was when he received advice from his father to listen to lots of people, but only to keep what works for him:

P 24: "Yes. It was sort of my dad saying at 11, "Do spin bowling." and at 12, 13, I wouldn't say he washed his hands of me, but it was his way of saying, "Right, I have told you everything I can tell you as a coach and as a dad, of how to play cricket." You now need to get, and I would always say this to young kids, you don't just have one person telling you how to bowl, how to back, or how to keep. Listen to hundreds of people, and if they give you a snippet of advice that you enjoy or you think, "Oh yes, that might work." Listen to people, and then take what you feel works for you and your game".

For 1 County-level player, a key moment during his development was when his coach turned him into a left-arm spin bowler:

P 28: "A key moment? Again, I'd have to pinpoint [coach X] at XXXXX turning me into a left-arm spinner. I think his character probably was something that I could relate to, as well. He had a, I believe, powerful external character that smiled and brought the best out of everyone for encapsulating my wanting to be,

or perceiving, that if he can do that and he's only bowling spin as well, then I can portray a similar package".

One spin bowler recalled the time when he had a conversation with both his captain and coach where they informed him that they don't think that he will be able to play first-class cricket at the club. This was a significant experience for him, as it made him more determined to prove them wrong:

P 25: I think the thing I was talking about before with you was the captain and the coach sitting me down preseason and sort of saying, "We've got a lot of spinners in the side and we don't think you're going to play a first-class game here." I could quite easily have just given up and said, "Okay, I'll look for another club," but I didn't. It gave me the fire in my belly to- "No, I'm going to prove you wrong. Even if I don't prove you wrong, I'm going to go down trying to prove you wrong." That was the key thing for me that turned my focus to toughen me up a little bit it and think, "You've got to have the ball in your hand to get these wickets, so you've got to do it." That was my biggest experience of what it was".

#### **4.2 Additional answers – England-level spin bowlers:**

Two England players identified key moments during their development as being: every match was a learning experience regardless of outcomes; and observing and playing alongside other professional spin bowlers:

**4.2.1 Learning from competition experiences.** For 1 England player, every match was a learning experience, regardless the outcome of the match.

**4.2.1.1 Quotes from England-level spin bowlers:** P 18. "You could go and bowl 10, 12 overs and got smacked around the park. If we lost the game, then so be it. It's still a learning experience".

**4.2.2 Observing and playing with other professional bowlers.** One England player recalled that the key experience during his development involved observing and playing with other professional bowlers. Afterwards, he then tried to imitate the professional players:

**4.2.2.1 Quotes from England-level spin bowlers:** P 17. "Probably watching and bowling with bowlers like Illingworth and Lock. Watching them bowl and working with them, and seeing how they think about spin, or just watching their energy on the crease. Just watching them. Just watching them as great spinners and trying to emulate what they did and their good attributes, and trying to just copy them".

#### **4.3 Additional answers – County-level spin bowlers:**

Three County-level players identified key moments during their development as being: having to opportunity to bowl against professional players and see how good they were; bowling on flat pitches for prolonged periods of time; and playing abroad for six months.

**4.3.1 Experiencing the standards of professional cricket.** A key learning experience for 1 County-level player was to bowl to professional cricketers and experience how good they were. That made the County-level player realise that he needed to improve his game if he wanted to play on professional level.

**4.3.1.1 Quotes from County-level spin bowlers:** P 29. "I would say going to bowl to the professionals most Thursday nights, and seeing how good they were and going, "I need to be a lot better than I am," and then realising there was a massive gulf in how good I needed to be, and then thinking, "Right, come on then. I've got to step up here and get better." That would be that moment, I reckon".

**4.3.2 Bowling on flat pitches for prolonged periods.** One County-level player could not remember a particularly key moment during his development, however, he did mention that bowling on flat pitches for prolonged periods helped to develop him.

**4.3.2.1 Quotes from County-level spin bowlers:** P 23. "I don't think there is any one particular one, but I think bowling on flat pitches. Bowling long periods on that, this built up some development".

**4.3.3 Playing cricket abroad.** One County-level player felt that playing cricket abroad for 6 months was an important learning experience, as it showed real commitment towards one's development.

**4.3.3.1 Quotes from County-level spin bowlers:** P 30. "Playing abroad. To go out for six months is a real commitment in terms of your development. To keep yourself going for that, to manage your own game, to use your own development and things like that, it's really important".

## **5.0 Question 4: Is there anything else of significance that we have not touched on that would be helpful in understanding your journey to becoming a (county or international) spin bowler?**

Answers to this question contain additional information that participants felt would be helpful in understanding their journey in becoming a professional spin bowler. Thematic analysis revealed that no clear comparative or differentiating themes emerged between the two groups. Some of the themes that emerged from the England player quotes include but are not limited to: enjoy the game, knowing what works for you and what doesn't, sense of perspective, multi-disciplined, and support. Some of the themes that emerged from the County-level player quotes include: Right person at the right time (timing), self-belief, and desire to improve. Considering the small numbers of players from either group of spin bowlers contributing quotes to each of these themes, we considered there to be no clear consensus on whether any of the themes was a commonality or a discriminator. In that sense, they might best be regarded as additional answers from the two groups.

### **5.1 Additional answers – England-level spin bowlers:**

**5.1.1 *Enjoy the Game.*** Two England players stated that players need to remember to enjoy the game. One England-level bowler pointed out that spin bowlers need not only to be crafty, but they also need to play with a smile, so that it looks as if they are enjoying the game. The player went on to explain that when opponents see that the bowler is not enjoying the game, they will try to capitalize on that.

**5.1.1.1 *Quotes from England-level spin bowlers:*** P 17: “Spinning the ball, being very crafty, and looking as if you’re enjoying the game. If you look as if you’re as sick as a parrot out there, you...That’s why Root is so good, because he plays with a smile on his face, doesn’t he”?

P 19: “Apart from enjoying it. I think everyone would say enjoy it, have fun”.

**5.1.2 *Understand what works for you and what doesn’t.*** One England player suggested for players struggling to adjust at England-level, players need to understand what works for them and what not.

**5.1.2.1 *Quotes from England-level spin bowlers:*** P4: “Some people go into the England environment and they struggle with the adjustment, or, with what’s being given. Rather than saying, “Okay even at this level, it doesn’t mean that’s going to work for me.” I think the point of that really, is the fact that the sooner you can get the lads to understand that you’ve got to work it out for yourself, what works and what doesn’t, rather than being told. Say, “Right, here’s an idea, try it, and if it doesn’t work, fine.” Rather than saying, “Here’s an idea, you must do it because that’s what’s going to work.” It’s not the case”.

**5.1.3 *Sense of perspective.*** For 1 England player it is important to have a sense of perspective and realism of what is expected in producing a spin bowler. The player is of opinion that they won’t be successful in producing a spin bowler if they are going to keep playing T20 or ‘50-overs’ cricket.

**5.1.3.1 *Quotes from England-level spin bowlers:*** P21: “I think a sense of perspective and realism of what we’re expecting to produce in England regarding spin bowlers. Graeme Swann was the last successful spin bowler, so why should it change overnight (suddenly), us producing good spin bowlers? Especially in four-day cricket or test cricket when we produce one every 20 years if you like- there has got to be some sense of perspective there and realism about what we’re trying to produce. We’re not going to produce if we just keep playing T20 cricket or 50 over cricket. It’s a completely different kettle of fish playing test cricket and four-day, so it’s more what’s realistic in what you want to achieve”.

**5.1.4 *Multi-disciplined.*** One England player highlighted that for a player to be successful, he needs to be multi-disciplined. Meaning that a player should be able to bowl and bat. This would require spin bowlers to become more selfish at times to get a chance to bat.

**5.1.4.1 Quotes from England-level spin bowlers:** P 17: “If you’re good now, the world’s your oyster. You don’t get finger spinners now who can play unless they can bat. If you’re a leg spinner or a great Muralitharan-type bowler, you can bowl, but the average spinner has got to be able to bat. He’s got to be able to bat and get your 50s and get your 70s. Like Swann or these types. You’ve got to be able to do both now. That’s sad, because you’ve got to make sure the coach lets you have a bat. Sometimes, if you don’t push yourself forward, you can easily never bat, if you keep bowling but you don’t get a bat. So you’ve got to be a bit selfish on occasion”.

**5.1.5 Receiving support.** One England player suggested that players should be supported to help them to develop.

**5.1.5.1 Quotes from England-level spin bowlers:** P 16: “Support players. Help them evolve, both mentally, physically, but also technically and tactically as well”.

## **5.2 Additional answers – County-level spin bowlers:**

**5.2.1 Being the right person at the right time.** Two County-level spin bowlers highlighted that spin bowlers should understand that the team requires different characteristics at different stages in their career. Therefore, it appears important to be ready, at the right place and at the right time.

**5.2.1.1 Quotes from County-level spin bowlers:** P 28: “Not that we haven’t touched on, but hopefully that it shows that people can come from many backgrounds, many walks of life. I was fortunate to have certain captains to play under, which afforded my character and my style to come to the party. I think it’s important that spin bowl or spinners understand that there are different characteristics required at different stages of their career. It doesn’t help them, but knowing and understanding that puts them in a better position. If you’re a guy, a Nasser Hussain, you want a slightly more defensive-style game because you want to rely on those seamers that you have. As a spin bowler, you have to understand that. The smart ones are the ones that are able to interact and understand what fits into sporting components within that group”.

P 30: “I think we touched on it at the start. I think there’s got to be a space for you in the team. It’s a timing thing as well. You know, I was lucky I came along when the senior left arm slow bowler was at the end of his career. It’s the same with wicket-keepers; it’s the same with spin bowlers: If there’s not a space for you in the team then you don’t get in. So that’s difficult. Yes, I was the right person at the right time. You know, you look at other players I played with and against, they’d come in, they were good players, but there wasn’t a readymade spot for them into the team where they can naturally go in and play. And I was lucky, as well, with the captain that we had; the first captain I had liked me as a person, in terms of, he

thought I brought something different to the team, so he liked that. But then other captains, it'd scare the life out of them, you know, that's the last thing they wanted".

**5.2.2 Having self-belief.** Two County-level players perceived self-belief to be important, as lack thereof would influence performance.

**5.2.2.1 Quotes from County-level spin bowlers:** P 24: "It's just you've got to have a belief in yourself. Yes, you've got to have a plan and an end goal to reach for ... [D]on't be scared of going for runs as a spin bowler, because that's how you are going to get wickets. Again, the faster pace, Twenty20 has taken over. I would still like to see spin bowling, and spin bowlers have a stop delivery for red ball. Learn how to get batters out the right way, as it were, back pads".

P 23: "Yes, it would be. I had no belief in my ability. No belief in it at all. The ironic thing is, when it got to the game, actually, in terms of some of my performances, got some of the best players in the world out. I could clearly perform. Clearly play. There was a lot of doubt in my ability".

For 1 County-level player it is about the desire to improve:

P 26: "I guess for me as a cricketer, I'd always want to improve, regardless of whether it was fitness. Fitness not so much, but I knew I had to improve, so that was one thing. In terms of bowling, I knew where I needed to be. I was looking up to [X] thinking, "Sh\*t, this is where I've got to be, so what do I need, from A to B? How do I get there? I'd always want to improve my batting. I know I started off at 11. I've batted as high as number 6 now for county and averaging 24. It was always about improving".

**5.2.3 Receiving recognition.** One County-level player highlighted having received recognition by receiving his County cap had an impact, as he immediately felt more comfortable in his surroundings.

**5.2.3.1 Quotes from County-level spin bowlers:** P 10: "I think having the recognition of getting my County Cap, I think that is quite a big part of my development, as far as being accepted and recognised into the First Team. It is like, it is an honour to get your Cap; not many people have got it, you know, this is what it takes to get there. So I think as far as my development as a County professional, definitely, you know, I felt immediately more comfortable in my own surroundings, you know.



# 1. The Quantitative Interview Schedule

## Interview Procedures: ECB Attainment of Expertise Project

### Introduction

This interview is designed to provide information about your long-term involvement in Cricket plus background information about your developmental sporting history. It consists of four major sections. The first section focuses on demographic information. The second looks at your general participation in sporting activities. The third section deals with developmental milestones and performance indicators in cricket throughout your development. The final section centres on unstructured cricket activities and time commitment to different aspects of these activities. The whole interview due to last 2 hours, however I will be helping us keep on track as were going through to ensure I don't take up any more of your time than is necessary.

## 1. Demographic and Family Information

### Personal Details

<Fill in PERSONAL DETAILS on Excel>

### 1.1 Homeplace Throughout Development

Please can you tell me (from earliest to most recent) all the places where you have lived and indicate for each the approximate dates/years you were at each place. For each place you lived indicate if it was your family home and if your home location was considered rural, small town, small city, or large city. I'll go through this age by age, from 6 to 24.

[NB: If you were living away from home for portion of the year at boarding school etc. please note this in the next question rather than this one.]

<Fill in HOMEPLACE Table 1.1 on Excel>

### 1.2 Education Throughout Development

Please can you now tell me (from earliest to most recent) all the schools/colleges/universities you have attended and indicate for each the approximate dates/years you attended them. We also ask you to tell us if the place you went to school was a "designated" sport school and if it was the principal place where you practice sport.

< Fill in SCHOOLING Table 1.2 on Excel >

## 2. Activities throughout the Lifespan

### Table 2.1 Organised sports

#### 2.1 Involvement in Organised Sports

Essentially, in this section, we would like to focus on all organised sports that you were involved in throughout your development – these are activities that were organized and led by an adult (i.e., coach, teacher, parent etc.) in diverse settings such as competitions, practices, and when receiving instruction. Looking back over your entire life please tell me (*interviewer write down sports in the first column of chart 1.1*) any type of “organised” sporting activities that you engaged in on a regular basis. I am interested in finding out about your involvement in any type of organised sports (i.e. basketball league, football league, swimming lessons, school sports, etc.), including cricket. Please list to me ALL the sports you participated in starting as early as age 4 and continuing up until age 40.

**<In chart 2.1, fill in the first column, “organised sports”>**

For each sport mentioned, I would now like you to tell me ages from when you started playing the sport to ages where you stopped. You may have stopped temporarily, in which case please also tell me when you restarted. (*Interviewer place an “X” in any of the boxes corresponding to ages that interviewee was NOT involved in the sport listed*). For example, if the interviewee mentioned basketball, but only played for an organised team from age 6 to 12, put X’s in boxes corresponding to ages 13-40. Do this for each sport listed.

**<In chart 2.1, put an X for each age that interviewee was NOT involved in the listed sports, individually>**

Let’s go through each sport individually across the relevant ages for a typical week for your sporting involvement. For sports that you were engaged in throughout several years it is important that you tell me about any changes in the number of hours in a typical week as you progressed in your development. Starting with cricket, please can you tell me the number of hours you were engaged in structured practice during a typical week at ‘age x’ and how many months of the year this would have been over, crucially. (*interviewer writes down the number of hours of cricket practice for the specified age*).

**<Fill in hours/week and months/year for each sport listed in Chart 2.1>**

Of the ‘x number of hours cricket practice per week’ at this age, what proportion of your practice (as a percentage) would you say was spent in your first discipline at this age?

**<Fill in % of practice time spent in specialty>**

During a typical week at the same age, how many hours of structured competition were you involved in?

**<Fill in competition hrs/week>**

Please can you tell me how many months of the year you would be competing in this way for?

**<Fill in months/year>**

Of the 'x number of hours cricket competition per week' at this age, what proportion of your involvement in competition (as a percentage) would you say was spent in your first discipline at this age? Based on who I've interviewed so far, the best way to recall this is probably the proportion of overs bowled in your typical matches at this age.

**<Fill in % competition time spent in specialty>**

### 3. Developmental Milestones, Performance Indicators and Maturation in Cricket

In this section of the questionnaire I would like you to focus specifically on your development in cricket. I would like to get a sense of your development in cricket by assessing different milestones that may have contributed to your achievement. For each of the questions I ask, please tell me the age at which the specific event occurred for you. If the event did not occur then please tell me so:

#### 3.1 Developmental milestones

< Fill in on Excel>

#### 3.2 Performance Indicators

<Fill in on Excel>

#### 3.3 Performance indicators and Maturation

<Fill in Table on EXCEL across then down>

For the next stage, I am going to be asking you questions about your practice history across a number of specific developmental stages (ages). The aim, is to measure your level of performance and challenges faced as you developed as a cricketer at different ages/stages. The first developmental stage will be when you were **14** years of age, I will now ask you a series of questions associated with this age and the teams you played for, and then we will repeat this process for a number of other fixed ages up until age **40**. There may be some of these teams which may not apply to you, in which case just let me know

Think back to age **14**. Could you please tell me the highest level of cricket representation you were playing for school? E.g. was it for your school year or for England schools? *(Interviewer reminds interviewee that these questions correspond to when they were 14 years of age and subsequently reports the age group that corresponds to each of the levels listed above in table 3.1).*

<Fill in highest level of representation>

Which age group did you represent?

<Fill in Age Group>

Next, please can you tell me how old you were when you were **first** selected into this school age group when you were **14** years of age (*interviewer individually lists the levels of cricket that the interviewee had previously reported engaging in at the age noted. Simultaneously, the interviewer reports the age that corresponds to each different age group team in table 3.1*).

**<Fill in Age First Selected>**

Please could you tell me what your main role was when representing this team (i.e. what your selection was based on). E.g. spin bowler/batsman?

**<Fill in role>**

I would now like to ask you about the level of challenge you faced at this age group, (specifically, level of challenge in this case is the combination of competition for places and the standard of opposition faced at each representation level and associated age group of your cricket). Please rate the level of challenge from being 0 % = Extremely easy; 100% = Extremely challenging. (*Interviewer lists individual cricket age groups the interviewees had previously reported playing in and simultaneously reports the level of challenge noted for each age group in table 3.1*).

**<Fill in challenge>**

Next, I would like to ask you about your ability compared to your peers at this school age group. Specifically, in your opinion, at what age did you become one of the best in your main role on your team at U... age group for ... representation level? (*Interviewer lists the necessary age groups/levels and then reports the age stated by the interviewee for each age group/level in table 3.1*).

**<Fill in one of best main role >**

Similarly, I would now like you to tell me in your opinion, the age at which you became the best in your main role on your school team at this age group? (*Interviewer lists the necessary age groups/levels and then reports the age stated by the interviewee for each age group/level in table 3.1*).

**<Fill in best main role>**

Please tell me your age when you achieved your first noteworthy/significant positive performance at this age group. This could be related to an individual milestone or your contribution to the team at a significant period, and is completely open to your interpretation... (Interviewer reports the age provided for the specified age group/level of cricket in table 3.1, interview recording will also be used to collate what perceptions of early significant performance are categorized as).

**<Fill in first significant performance>**

I would now like you to tell me about your physical size in comparison to your team mates at this particular age group. Please tell me if you were of greater physical size (G), smaller (S) or equal (E) to your team mates/cricket peers. (Interviewer records the responses related to physical size on chart 3.1).

**<Fill in physical size >**

Based on your perception of what good vs poor facilities looked like during your development, please tell me whether the facilities which you practiced with at the U... age group for ... representation level of cricket were poor (P), below average (BA), adequate (A), good (G) or excellent (E). (Interviewer lists the cricket levels associated with the age groups relevant to the interviewee and then reports interviewee's perceptions of facilities in table 3)

**<Fill in facilities>**

In a similar vein, based on your perception of good and poor practice, I would like you to tell me about the quality of coaching you received from your principal coach (most contact time) at the U... age group for ... representation level of cricket. Please rate this as poor (P), below average (BA), adequate (A), good (G) or excellent (E). (Interviewer lists the cricket levels associated with the age groups relevant to the interviewee and then reports interviewee's perceptions of coach competency in table 3)

**<Fill in coach competency>**

Lastly, for this section, I would like to explore the development time (in months) that you missed as a player due to prevalence of injuries and nature. Please note that these can be cumulative, therefore feel free to take some time to think about this. For simplicity, we will record injuries at ages only rather than across each team you represented, starting at the age of 14. (Interviewer reports prevalence of injury in months for age 14 in table 3.1).

**<Fill in injury time>.**

**Interviewer repeats above subsection for each fixed level and age listed in Table 3.1  
(17/20/24/28/32/36/40)**

## 4. Unstructured Activity in Cricket

In this last section, I would like to explore unstructured activity you may have engaged in over the years, starting with sport generally before moving on to cricket specific activity.

First of all, how old were you when you first became regularly involved in any form of unstructured sport (e.g., in the back garden, or down the park)?

We are now going to go into more detail for the different unstructured/unsupervised activities that you have participated in cricket over the years. As in previous sections, we'll go through this according to age, year by year.

I will be asking you about the following activities:

### Definitions:

#### 1. Unsupervised cricket play:

Any cricket related playing activity that is not structured and usually for fun/enjoyment either by yourself or with a group

#### 2. Unsupervised cricket practice:

**Group practice without a coach** (any practice where no coach is present but you and one or more players are practicing together).

**Independent practice without a coach** (any practice where no coach is present, no-one else is practicing with you, but you are practicing on your own).

3. Reading about cricket
4. Watching cricket on TV
5. Going to watch cricket LIVE

*Don't worry about trying to remember these, we can over them again whenever needed, I'll go through them one by one.*

### Anything Else...

Is there anything else that you can think of that might be helpful in understanding your developmental journey to becoming an established County player/ England International, that we have not discussed?

<Fill in unstructured activity in cricket>