00:00:00.000 INTERVIEWER Do you feel the rating of the Acad	> lemy or currently working within influ	00:00:15.470 ences your understanding and		
application of bio banding?				
00:00:03.370 Interviewee	>	00:00:04.440		
That yeah, that's an interesting one. The first thing I'd say about that is that almost my experience using bio-banding occurred at previous football club, so I've recently moved this summer. So yes, the environment definitely effects how the application and use of it in some environments it's much easier to apply bio-banding. In some environments it's more difficult.				
00:00:45.060 INTERVIEWER Can you please give like some eva	> amples of how it's differed between eac	00:00:54.990		
	imples of now it's unrefed between eac	-		
00:00:54.600 Interviewee	>	00:00:54.930		
Yeah. At the club as part of the bio-banding philosophy, so to do research, and then also become a practitioner there. So, it was already embedded within the football club when I arrived. That meant that the buy in from this senior stakeholder was much higher because they already understood the concept and had seen it in practice already at my new football club, we haven't done anything with regards to bio banding yet, and that's mainly because it wasn't already in place. But also, my perception is that we need to go through that education process 1st and then also have a joint decision making about how we see the applications and moving forward rather than just me as a lone person trying to push bio banding forwards.				
00:01:51.040	>	00:01:58.940		
INTERVIEWER Can you please just clarify the category rating of each of the two academies please?				
00:01:58.470	>	00:02:01.980		
Interviewee So I was a category three and then	I'm now at category one.			
00:02:00.900	>	00:02:01.160		
INTERVIEWER				
Oh ok. Tats quite surprising that y cat 1.	you did more bio-banding with the cat	3 academy then you have the		
00:02:17.890 Interviewee	>	00:02:20.850		
Yeah, I don't think it's necessaril practitioners that are involved at be a bit smarter and use more innovat	ly due to facilities. I think there's an oth of the clubs. And also when I was a tive strategies. So therefore, trying some re the capabilities to compete with a ca your talented individuals.	at category three, we had to be ething like bio banding makes		
00:02:49.970	>	00:03:08.110		
INTERVIEWER Do you think your role or your col	lleagues role influences your motivatio	ons for employer bio banding?		

UM, and this could be, say, for instance during like match player or trainings or in different circumstances?

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00:05:43.710

Yes, definitely. I think that there's. Uh an interaction there between all the different roles and how they can then apply bio banding. And obviously you need to have some sport science growth, maturation understanding to be able to implement it, but then also. Often those sports science staff don't have the largest say about what the training schedule and training program looks like, and therefore a change in that program to incorporate bio banning can be more difficult. Especially with my role changing from. My previous role where I was embedded as part of the mpt and made those joint decision making for the ydp age groups that made it easier to incorporate bio banding because they today I was having those discussions with the coaches. I've now moved to a slightly different role at my new club and therefore don't have day-to-day discussions with the Ydp coaches and therefore. Trying to apply bio banding, it's being more of a slow process.

00:04:15.270

INTERVIEWER

00:04:27.860

Yeah, Um just based on, like your academic background and stuff. Uhm, do you feel it influences and enables you to employ bio banding techniques better then say as your colleagues?

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00:04:29.150 --> 00:04:31.370 Interviewee

Uhm, obviously for my undergraduate dissertation, I focused on how growth and maturation affected Academy football players. I then spent my masters doing a research masters, uh, on the same topic of growth and maturation in Academy footballers. Subsequently I wrote a paper on bio banding and then my PhD is continued on. Looking at how growth and maturation effects injury. So yes, definitely, but also I now see part of my role being the education of those staff to help them understand those concepts and enable them to incorporate strategies such as bio banding. Yes, everyone sort of looks to me to be able to incorporate it, but with just me having an understanding doesn't allow the broader environment to actually implement it.

00:05:26.000 INTERVIEWER

And so do you feel because at the minute kind of this only person who has got this greater understanding of it. Do you feel like maybe coaches can be reluctant or you know kind of want to stick to the old ways in coaching? Or are they taking to bio banding with open arms as such?

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00:05:44.400 --> 00:05:45.140 Interviewee

I haven't got to the stage yet where we're going to try and implement it, UM, and the reason is obviously because we're going to do the education stuff before I'm expecting that Some of the coaches will take it with open arms and some of the coaches will be a bit reluctant. And then depending on the seniority of those coaches, will depend on how likely it is to gain momentum being maintained within the program so that yeah, that that it's gonna depend on the seniority of the coaches and who gets to make the key decisions, whether that is then incorporated. I think that in general coaches are willing to try it and then from my experience they can see the benefits. The issue that they sometimes have is that they feel like it detracts from what they the rest of the time of their training, so they see it as the time that they can't spend with their squads, which needs to be considered.

00:06:59.040 INTERVIEWER

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I'm in so just again based off say, previous club to now. Is there anything that you would like to do, you know, apply different in terms of bio banding and when you eventually get there with this club like what would you like to do different?

00:07:16.060 Interviewee

I think the biggest difference would probably be down the line how it's scheduled so rather than doing so the previous club, we did uh bio banding week every. So N number of weeks. So however often it was arranged. Uhm, that I think that's something I'd like to try and consider is doing it bio banding day every week and therefore having that interaction as a regular part of the schedule Which would be the first thing that we consider? The other thing I would like to consider is, like I said, is more of a consideration about players individual development programs. So to rather than it just being an almost an addition to the program, it's actually embedded within the program, so that players have key elements that they need to work on throughout the season, but bio banning could also fit into each individual development programs.

00:08:21.480 --> 00:08:36.810 INTERVIEWER

So, as you may have noticed these questions can be based on your previous club or the club you are at now, so if you feel it's easier to answer, based on either club, then feel free to use any club as an example. So, for instance the next questions. Does the application of bio banding vary between the development phases within your Academy?

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00:08:41.850

Interviewee

Yeah. The main reason for that is. That during the foundation phase growth maturation don't have as a larger perfect on Selection and also you don't see as large differences in the physical capabilities of the players at that stage However, other strategies should be considered, but that's a different conversation and then obviously once you get further towards the PDP again, the classifying of players in based upon early or late maturers or maturity status. Gets more difficult as well as players reach full maturity and you can't then necessarily classify them based upon. Our typical measures of semantic maturation, so the phase that I see at most important within is the ydp base, which is dependent on the club, but essentially 12 or 13 to 16.

00:10:09.020 INTERVIEWER

So that's the general questions kind of covered up. There would have been some based on the influence of maturity practice, but as it 'cause I can't see your survey responses, I'm not able to do, you know pinpoint which would have been best for that, so we'll move on to start off with, could you please give some detail on like a positive experience you've had using bio banding?

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Interviewee

Yeah the first positive experience that I had well the key one that comes to mind is that we ran a series of bio banding tournaments and we've got some really good feedback from both players and coaches about the concept, but also the head of coaching notably came to me and said, oh, I can really understand how this works by having different bands on playing on different pitches, you can see the differences between those phases and therefore he understood how that could then affect the technical tactical development of the players.

00:11:12.850 INTERVIEWER

And so, like you said that those things are kind of good when yeah, you do have. Those coaches were kind of reluctant, to taking bio banding on board. So yeah, I suppose that's a really good example based on your experiences.

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So, can you discuss how, you've bio bonded players previously and which maturity method you used, say did you match or mismatch players?

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00:11:37.480

Interviewee

Yeah. The method that we used was predicting percentage of adult height through the Khamis Roche method and then representing their current height as a percentage of adult height Uh, we then group the players based upon so for our bio banding tournaments. We then use 5% bands, so from 80 to 85, 85 to 90, 90 to 95 we internally, though when we were bio banding within the club we would then also consider about how we might adjust those bands So arbitrarily to allow an equal spread of players. So instead of it just necessarily being at 5% groups if 1 group was then twenty players and one group of 16. We would then potentially move the border just so the group both groups at 18. And I think that that personally, I think that's an acceptable practice because you're still reducing the variation in maturity you see, within a group, but also that's part of being in Academy football where there are. There are logistical requirements to training and gameplay and therefore. Just using specific cut offs in the literature could neglect from that, UM. In terms of maturity mismatching, I haven't got any experience of that. I don't really see the benefit to doing that at all so I don't understand my personal perception is that I don't understand why you would want to play a certain maturity status against another because they're already getting that in the age group and potentially you're just highlighting and creating extreme differences. When I see the real benefits of bio banding as reducing those differences so you can focus on the other things. You're almost creating a physical bias within a session on purpose which I don't particularly see a benefit off.

00:13:48.060 INTERVIEWER

Yeah so in terms of how you've previously implemented bio banding. How do you feel it's proven useful for the club and this could be say for instance if a particular athlete has you made it based on bio banding? Or yeah just how do feel it's proven useful for your club.

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00:14:08.640

Interviewee

I think the largest benefit to it is Within club identification of talented individuals. So by bio banding players and understanding each players individual development in terms of growth maturation. You are understanding those individual differences. You can also then provide each player with a specific development program based upon their phase of development and therefore. It gives all staff a better understanding of that individual player, and when I worked for my previous club, we had a few notable examples of players that were purposefully retained for a number of years because we understood that they were on a different developmental path to other players, and subsequently some of those players made it through to play first team appearances or made it through to get scholarships and those sorts of things. The next level to that is allowing identification outside of the club to then allow you to identify all the players, but that's not really a bio-banding thing, so I think bio banding starts that conversation of understanding individual development and highlighting to All staff Which players would fit into which phase at that particular moment in time, and therefore they can understand that both they can see an early mature that's moved, they can see the group of on time maturers that have may have stayed in that equivalent band, and they can also identify the late maturers which have moved and that then gives them The possibility to understand there are individual with differences in the group and therefore when we think about retaining release, that's what should be considered. The flip side to that which is another particular advantage that I see is that obviously we've got a selection bias in academies towards early maturers. With the, bio banding situations that I've been in, we would evaluate those early maturers, both in their age group context and a bio banding context, and what we highlighted with some individuals who were OK in their age group context, not of particularly high quality, and potentially not at a future Professional player, and therefore when we moved into that bio banding context it further highlighted when they were maturity matched that they didn't have some of the skills that would be required for further development and therefore what we did was. We then highlighted those individuals that they needed development programs, but also that they should be considered in a different light to the rest of the players within their age group.

00:17:00.550 --> 00:17:14.650 INTERVIEWER As you where say bio banding enable them players who might not have been given the opportunity to continue with the club and focus on their own development, so you do you feel this links in to clubs

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00:17:15.730	>	00:17:16.190
Interviewee		
Yeah.		
00:17:15.820	>	00:17:37.640

INTERVIEWER

rationale for using bio banding?

'cause it gives more athletes the opportunities you know to be able to develop. But do you feel that say for instance, has the rationale from the previous club that you worked at to the one you are at now has changed or do you feel it is a similar rationale for why you have used bio banding and why this club now want to eventually use bio banding?

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Interviewee

Yeah, so I think I think the rationale stays the same, it just depends on when you would start implementing that, and then whether other people would understand that underlying rationale and that's the difference ... their current understanding.

00:18:00.310 --> 00:18:12.420 INTERVIEWER And so just on the flip side to some positive's bio banding can bring him. Can you give me an example

of a session where bio banding has potentially provided a new challenge for yourself or for the athletes?

00:18:13.260 --> 00:18:14.450

Interviewee

Yeah, I think. It provides a variety so in that example I just gave. Obviously, we had that early mature who then had an increased physical challenge. They then didn't deal well with that increased physical challenge, and that was subsequently a development point for them moving forwards I think it's also challenging for a late mature, but in a completely different way. Obviously there's psychological and social effects of moving players around, and therefore they need to be supported with that new potential challenge. I would consider that the whole point of bio banding is to create new, challenging opportunities for the players. Rather than sort of almost flip age groups on their head and provide them with a different challenge and opportunity Yeah, so in terms of a late maturer we had a clear example of when a player thought that he should be training with his peers from his age group but actually. He was moved into a different zone that then provided them with a bit of demotivation about why they were there, but then also provided them a new opportunity to play in a position that they didn't normally play in and that subsequently became that players new position moving forwards when they became an older player and then older age group, so having that new opportunity provided them the new challenger playing in a different position but also then that further development.

00:19:54.900 --> 00:20:02.240 INTERVIEWER

I feel we can agree this is why it's important to like always be introducing those new challenges to

players 'cause if bio banding wasn't a concept, maybe he would have been stuck in the old position and they wouldn't have been able to progress as far as he did in terms of the club.

Um. So do you think bio banding offers an advantage over traditional approaches?

00:20:23.560 --> 00:20:23.980 Interviewee

I think it just offers something different. Mainly I don't think that I, I personally would never pick one approach or the other. I think that there's a mixture of the two would be the most ideal way. It obviously it's got a variety of advantages compared to that, but there's probably also some disadvantages about or bio banding as well the main advantages that I see we've probably already discussed being able to understand each player individual development and then also providing them with new opportunities, whether that's. Physical, technical, tactical, psychological, social and then using those opportunities then learn.

00:21:15.000 --> 00:21:25.540 INTERVIEWER

And again, based on specific groups of players do you feel bio banding places too much emphasis on a specific group of players. So say for instance the early maturers or the late maturers.

00:21:44.640 --> 00:21:48.140

Interviewee

I don't think it places too much emphasis on the early or late maturers, I think, that the emphasis is probably equal between those two. I think that people would probably forget that the early maturers. There's an emphasis there. I think the group that gets forgotten about is people that are on time. So if you're right on that in that middle group, you're potentially don't have a new challenge. You just have Well, so you've got a new environment, but the challenge could be the same as what you've experienced before, and therefore they might. They're probably the ones that.

Are least considered and then early in late materials should be equally considered, but they might be. Might be a little bit towards the late mature is getting considered more.

00:22:29.420 --> 00:22:41.860 INTERVIEWER So could you almost go as far as to say that those athletes who were just stuck where they are almost at

So could you almost go as far as to say that those athletes who were just stuck where they are almost at the risk of being neglected due to bio banding? Or do you feel it doesn't go as deep as that?

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00:22:47.380

00:23:53.430

00:22:43.570 Interviewee

I, I think there's a potential risk there. I don't think that's a particular disadvantage. I think that. You still understand they still get a lot of the same things, it's just they don't get a new physical challenge or a new technical challenge. They might. Then it might just be the same as what they're used, however. If that group is on time in normal, then that's what they experience is they're not trying to counteract the age groups for them because they have always been on time anyway, so probably not as deep as neglecting their development, but probably something to consider in terms of making sure that they're still considered in terms of their development.

00:23:29.830

INTERVIEWER

And so just to carry on, we are into the next like series of questions. And it is to do with the barriers of bio banding, UM and so the phase one is, if any. Could you please provide some detail on a negative experience you've had one using bio banding and the challenges. Say you could have faced as a coach or the athletes may have faced due to these barriers.

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implement educational programs or assist with education.

INTERVIEWER

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00:23:54.860

Interviewee

I'm so say these 3 barriers which you have highlighted, do you feel like these are barriers which all academies face? Or do you feel it's just being at the academies and you've been at yourself?

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But yeah, so. In terms of the negative, I can't really think of any particularly big ones. Themain negative is coaches being a little bit resistant to those changes which for me the three main factors would be firstly the logistical challenge of moving players around between age groups when players might all train in their specific age groups, but also might get lifts to sessions in those age groups. There might be particular times of those sessions and then flipping that on its head and moving players around and making them come at different times and potentially not be able to get lifts. And there's a whole host of logistical factors that are incorporated by mixing age groups. So that's one key barrier. The second would be coaches' perceptions, and that I think the main part that links into the third one is the main reason for that is their education around why they're doing it and what the benefits and are for each of their individuals, and they need to be described that it's not just like a like, a holiday camp style of mixing between age groups and let everybody play football. It should be a purposeful development tool.

Interviewee I, I think that it's all academies would face those barriers in some proportion. I think that how much that affects, whether they could apply bio banding with vary dramatically between the contextual factors of those academies. So if you had one Academy that everyone trains on the same night and transports provided for them, that first barrier would be very minimal. You might have an issue about changing coaches between age groups or in these days about COVID restrictions and moving players between bubbles and that sort of stuff, but that barrier could be reduced. The second one about coaches' opinions. Could be reduced based upon education and it might not be a barrier because the coaches might be very willing and open, but it could be a severe barrier in another context and then the final one of education just depends on the level of education and how much. Again the Staffs quality of their education to then

00:26:33.260

INTERVIEWER

Um aside from those three. Do you feel like the general barriers which clubs face could be alleviated by which category the academy has been awarded?

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00:26:59.090

Interviewee

Yeah, I think. Naturally, if you've got more resources, implementing something new should be easier, but also, on the flip side. Creating change in an environment which has more staff and more constrained plans and ways can also be more difficult. I think rather than it being the category that would affect their barriers, I think it would be the context so the staff mainly the existing educationally existing program, would be the barrier rather than What category number you are?

00:27:36.890

INTERVIEWER

And so, based on your own experiences, do feel there is anywhere which any of the barriers could be eased?

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00:27:45.360 --> 00:27:45.790 Interviewee

Yeah. The logistical one forward planning being able to give people an advance notice about what's

00:25:30.480

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going to change and how it's going to change to allow them time to come up with solutions. The coach one, honest discussions and education for them. The clubs understanding and education again. Either you have internal staff learning more about the concept and then further educating the rest of the club or department or getting somebody external in to assist with that education.

00:28:23.150 00:28:23.600 --> **INTERVIEWER** Um, sorry im finding it hard to hear you, can you hear me still? 00:28:27.970 --> 00:28:28.380 Interviewee Yeah. 00:28:39.000 00:28:28.560 --> **INTERVIEWER** Great, OK, so the next set of questions are based on the multidisciplinary application of bio banding. Please can you describe how and why you have used bio banding? so this is in physical, technical, tactical, psychological development and injury reduction. 00:28:49.700 00:28:50.310 --> Interviewee Yeah. Well, so there's a whole host of questions there. What was the what was the first part again? 00:29:06.910 00:29:08.170 --> INTERVIEWER Yeah, it was can you describe how you have used bio banding? 00:29:16.350 00:29:17.750 --> Interviewee

Yeah, so I've done it in match play, done it in training and often that was in one-week blocks, which meant that you'd spend the whole week training in your block groups and then end up with a fixture. The coaches seemed to like that because of the continuity, and then you're preparing for the game at the weekend. Like I said, I would like to try at system where you might bio band every Tuesday, for example, but it's once a week rather than leading towards a fixture I think the main the main uses obviously hinge around understanding each players potential performance and potential, and therefore their development. And that's where. So that's where I see the advantage with bio banding in terms of its traditional sense, which is grouping players based upon maturity. I think that there's enough then this next element, so that is what you said about the injury stuff. I think it's in my in my personal opinion. It's quite loose to call the injury reduction strategies bio banding even though you are grouping players based on maturity. For me bio-bandings more about maturity matching players rather than OK, we're going to provide a specific intervention at a specific time for players, but I used that process of understanding who's going through their growth spurt and who's growing at a rate and subsequently adapted their training program, and we had some real we had significant decreases in the likelihood of injury for those groups. And that's so that's why my PhD study went in terms of understanding how we could reduce injury during the growth spurt.

00:31:07.920 --> 00:31:19.240 INTERVIEWER And then the second part of the question was why did you implement it in such a way? So was it to do with like the physical side, the technical side, tactical or psychological?

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00:31:19.780 Interviewee 00:31:21.140

Yeah so. The way that we, the reason that we implemented the bio banding stuff in the way that we did, was mainly because of the coaches perception about having a squad and then progressing towards a game, which is obviously a technical tactical approach but also potentially a slightly biased approach from them. The way the reason that we did the Uhm, injury prevention stuff was quite simply to prevent injuries. So like a physical aspect of injury being the main reason, and there was no. So that that was obviously the main reason, but the other elements of development were also considered in how we would then provide that intervention.

00:32:06.480 --> 00:32:08.470 INTERVIEWER the final part to this question is is such use a starle of the planer development surrighters?

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the final part to this question is, is such use a staple of the player development curriculum?

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Interviewee

Uhm? It should it should be. I don't know whether it is at any club. I think some clubs will claim that they do, but I don't think it Is to the level that could be explained as a staple of the player development curriculum. I think the real next barrier for bio banding, like as a concept, is integrating it fully within. Player development so that it's part of the curriculum and therefore embedded within how players learn and develop. And just because you bio band once every six weeks or once a week doesn't mean that it's part of your curriculum. It's more about each individual learning plan incorporating how, bio banding helps them with their learning plan.

00:33:14.430 INTERVIEWER

And so this takes us to the final section of the questions, which is kinda just summary questions of the interview so I'm the first one is what is it about bio banding which you feel, enhances the assessment within physical, technical, technical, tactical, or psychosocial characteristics.

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00:33:39.300 --> 00:33:44.470 Interviewee So I think by maturity matching and levelling the physical playing field. That offers opportunity to sort of almost think it as a constraints-based approach where yeah, you're removing the physical elements of both your teammates and your position, and reducing that variation to allow you to show development

in terms of your technical, tactical, psychological and social skills and so yeah.

00:34:11.650

INTERVIEWER No, that's great and so I know you covered earlier about you thinking the, UM, you've development phase was the best phase in which bio banding can be implemented in but when do you feel that athletes should be introduced to bio banding? So, do you feel they should still be introduced through all three phases or do you feel like as you expressed earlier in the interview they should potentially be introduced to bio banding at a later stage?

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00:34:38.950

Interviewee

Uhm? I'd probably introduce it at about 11 or 12 years old when we start to see those maturity differences occur. I would also advocate, though at a younger age that mixed age group competitions should also occur, and that like I know that's not bio binding, but the idea of mixing between age groups and creating that sort of social and psychological challenge of Mixing players and not being stuck within a team would be of benefit and then that gradually becomes bio banding when you start seeing those physical differences occurring at 11 or 12 years in boys.

00:35:17.710	>	00:35:38.190
INTERVIEWER		

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00:32:27.390

Yeah no, that was perfect. So we have come to the end of the interview but is there anything that you would just like to cover on or add? Just before I stop the recording?

00:35:49.350 --> 00:36:02.620

Um. Not right now I can think of anything. We've covered a variety of different things, but if it if there's anything you want me to clarify at later date, I'd be happy to do that. If you go back and find a further question you wanna ask about something that I've said, then that'll be fine. But yeah, nothing more to add.