

Daniel Thompson 00:00:01

Hello. Welcome to the British Canoeing Coaching Podcast. Today's podcast episode is brought to you by the England Talent Programme. This is the first of a three-part strength and conditioning series in future episodes we will be discussing what is developmentally appropriate physical preparation. Across Olympic and Paralympic disciplines the importance of physical preparation and establishing those robust foundations and fundamental principles in adolescent athletes.

But today we're going to talk more about sport sampling, what it is and how it can be useful for developing athletes. My name's Daniel Thompson I'm the Talent Operations Coordinator for British Canoeing and joining myself with discussions on this topic area today it's Ben Lewis Pathway Strength and Conditioning Coordinator for the England Talent Programme, at British Canoeing. Hi, Ben.

Ben Lewis 00:00:57

Hi Daniel, thank you for having me.

Daniel Thompson 00:00:59

Yeah, it's good to have you. And before we start, I want to give a bit the background of yourself and your role at British Canoeing and your previous background in S&C.

Ben Lewis 00:01:10

Yeah, certainly. So I started working in British Tennis in my early days, so that was supporting the development of junior British tennis players coming through the programme and trying to transition them up through the age ranges and so I did that until 2014. 2014 I took the role of Head of S&C at Nottingham Trent University and within that I was responsible for managing the whole programme and working for different sports and managing a team of S&C coaches to deliver on that during my time at the Uni we supported a lot of developmental sports, which led to me leading the S&C provision for Table Tennis England as well.

And within that, we did a lot of work within that that youth development phases in terms of how an athlete can kind of progress through through the system and ultimately make it to a kind of a senior role and, and I had that role of Head of S&C at Trent for seven years, I think before taking up the mantle of S&C coordinator for the pathway at British Canoeing and here my role is to work closely with the coaching team and to kind of support the education and how the kind of programs align from throughout the pathway and ultimately how we take and progress athletes through that athletic journey and whether that should, you know, whether that that may or may go hopefully ending up in world class programmes.

Daniel Thompson 00:02:47

Great. Thank you for making that summary and background I'm really looking forward to chatting with you today and for the next couple of podcasts episodes on S&C and we hope that this three

part series will be really useful for the coaches, parents of young developing athletes and adolescent athletes themselves. So down into today's podcast episode on Sport Sampling, that's the term that's commonly thrown around by NGBs and sport coaches. But what does the term sport sampling actually mean?

Ben Lewis 00:03:20

It is one of those terms that get thrown around. You tend to get that in NGBs is that they seem to be sort of the buzz words and so kind of sport sampling or you may have heard it called sport diversification if you want it to sound even fancier, it essentially involves children trying a variety of sports and physical activities.

So rather than specialising in one particular sport and when we say specialise in, that essentially means an intense practice within that sport. And that's the exclusion of other sports as well. What we're talking about is a broad exposure across multiple sports and multiple different landscapes. So therefore that athlete can pick up different skills and different physical capabilities along the way.

What I think is interesting to touch on is that early specialization because it does get, you know, there's a lot of conversation around it and there's camps saying it's a good thing there's camps saying it's not a good thing. And I think where where I kind of sit within it is the difference between early exposure and sport, early specialization.

So if we were to take a look at paddlesport sport particularly from a canoe slalom perspective, we know that historically success has been shown that if you you hit a junior world, at J17 where you make a senior appearance at worlds around 22, that historically has been an indicator of success. So it's that kind of that early age range it's important to be exposed to the sport. So you can start to understand the technical and tactical demands and how to apply that within the sport. And you know, that happens from an early age, but to develop holistically and to develop the kind of physical qualities that kind of underpin the technical and the tactical, we would use kind of broad physical skills.

And that's why we use sport sampling, if that makes sense.

Daniel Thompson 00:05:24

Yeah, yeah, absolutely. And yeah, thanks for touching on a little bit around early exposure, early specialization as well that sort of it's a key thing that it needs to be thought about as well as when we're talking about this topic of sports sampling. And but actually going back to what you mentioned at the beginning about sport sampling and having that for exposure to a variety of different sports so why is it important to have that broad exposure to that variety of different sports?

Ben Lewis 00:05:55

Yeah, that's a good question. I think we've talked about it for a long time trying to keep the what, some kind of clear, take home messages that we can discuss. And for me, I'll try and break it down into a few, few different areas. So the first one being is looking at athletes transitioning through the transition period from a junior adolescent into a senior programme.

And essentially for you to look at, you know, if the goal of what we're trying to do is to develop a stand out adolescent player, then early specialisation makes sense and it can be successful because you're, you know, you're accelerate that development from a young age. And however if we're looking to maximise the athletic talents and to kind of transition through to senior success and then a lot of the evidence, both academic and anecdotal, will suggest that those who've been exposed to multiple sports, multiple sport participation, and with that later specialisation, that tends to increase the success later at a later stage of life.

So, you know, you tend to see you can get adolescents who are really excelling in their sport at kind of 14/15 we used to see it in tennis a lot they'd be unbelievable you know we had guys who would be sort of number one in Europe but they never they never made that transition across. And so it's time to look at why that might be. I think it's I think that's that's something that's really interesting.

The second point and a real crucial one is looking at injury. So specifically like the repetitive nature of school and the demands of canoe and kayak. You know, they get very unique and stresses on the body and things such as sitting in the boat, being, you know, sitting or kneeling and repetitive actions that come across in the trunk in the shoulder.

So if you think sort of globally, about the time that is spent in these positions in the boat, that's going to put a lot of wear and tear on the body, which I'll see, you know, when the body can't handle that amount of work, it can start to break down. And the other thing that will lead to it can lead to a very specialised set of skills, but quite a narrow bandwidth of motor skills and motor learning.

So what that can inevitably do when that athlete progresses through later stages of development, they can have a lower ceiling. And within that that can be kind of an increased risk of injury. And so I think that that's a really important, important point to kind of get an understanding of early. I think we do really need to touch on on potential burnout because that tends to be what we see quite a lot is you see a lot of athletes excelling through and then and then you never really hear about them again and you don't necessarily see them in those circles.

And that tends to be that for it can lead to if you've focused so much time on one sport it can potentially lead to a little bit of isolation within that and the athlete can miss out on other areas of life as well and I know certainly for me that that's something that I found. So I was a tennis player and and we spent so much time just focused and driven that one sport that you miss out on other things and then when you start to experience those other things you know, it can kind of distract you from the sport because you've been so focused for so long and that tends to be potentially a lead to the athletes dropping out of the sport.

And then finally, the thing that I think is the most interesting from my perspective is it's looking at motor learning and looking at development from a holistic point of view and a lack of exposure to certain elements of motor learning can later on have an impact in life.

It's not just from the athletic career but kind of the general physicality later in life. That kind of saying that you can't teach an old dog new tricks and essentially the nature of motor learning is very neurally driven kind of the young athletes have a high degree of neuroplasticity and that kind of that sort of therefore leads to the building of these neural connections and coordinating these pathways.

It's much easier to do so when the athlete is at that kind of development stage as opposed to kind of like later on in life. So the greater the exposure to different physical environments and it creates more adaptability to a variety of situations because they've got a greater neural network. Everyone likes an analogy. So I was trying to think of what kind of makes my witterings make a bit more sense, I suppose.

And if you kind of think of a tube map, the more lines you have, more destinations you can go, more routes you can explore to reach a destination. So if you only have a bakerloo line, you can only reach Elephant and Castle. And if that line isn't working well, you have no other option to use. You could potentially never reach that chosen destination.

So it's about trying to kind of lay all those foundations and lay all the pathways so the athlete can kind of go in any direction they want. Then they can problem solve anything that they come across. So kind of just to kind of recap those areas for me as it's looking at the evidence around transitioning from Juniors up through to Seniors, it's looking around sort of wear and tear around those injuries, looking at athlete burnout from potential isolation and then kind of how the body is going to kind of learn and think of those kind of physical, physical skills that they develop really.

Daniel Thompson 00:11:44

Thanks Ben, I think that's some really very good points that you mentioned there. And I really, really like that analogy that you just mentioned and I was picturing that in my head as you were talking around the tube map and and yeah, seeing just the London tube map and seeing all the different tube lines. And then when you're saying you if you've got that and having sports sampling like exposure to different sports, it means that there's other avenues of motor learning in other sports that when we talk about motor learning, we talk about movement patterns, hereand movement skills, and then being able to apply that into the sports of paddle sports when you come across a problem,for instance. And so yeah, I really love that analogy there.

Ben Lewis 00:12:33

I think the other way to think about it, you know, if you went if you went to school and you were only offered one subject, then you would look at that and you would potentially worry about what the development is going to be academically, and what options that's going to give that person, you know, as they kind of progress through life.

And, you know, we wouldn't deem that acceptable if you went to school and you only got taught English, for example. So therefore, why do we think it's appropriate in sport to just be provided one sport? And that's all we do. That is another way to kind of get your head around it.

Daniel Thompson 00:13:04

Yeah, absolutely. Yeah. So you talked a little bit about sports sampling and having exposure to variety of different sports now within our sport. So paddlesports, are there particular sports that you would say would be ideal for, say, a canoe sprint athlete or a canoe slalom athlete, for instance?

Ben Lewis 00:13:27

Yeah. So it's kind of trying to find kind of context behind when you're looking at multi-sports sampling and what skills are going to transfer and so how does one skill transfer to another? So it's sort of like what are you using that for? What you're trying to get from that skill, what would be gained from doing it? So if you to look at things such as gymnastics and climbing or martial arts, I would say they are very kind of strong, transferable skills.

So they're going to require large degrees of kind of body awareness, exceptional kind of levels of strength, really good trunk control and flexibility. If we look at kind of those underpinning qualities, all of those principles are going to transfer to the requirements. You know, when you're in the boat, when you're on the water. And so I would say it's like it's looking at sports where you get specific kind of skill transfer from and another one would be swimming.

So for athletes going to have to develop a good relationship between, you know, how the shoulders work with the trunk and how the trunk works with the hips and also is going to build a good energy system development in similar sort of muscles so big lats, big pulling muscles and again which you kind of help transfer to the canoeing. But then there's other other sports that you can do that might not directly relate to canoe or kayak performance, but they might provide sort of gross motor skills and movement skills.

So you can look at doing athletics to teach you how to run and sprint properly and jump properly and throw properly. For example, you can look at football, how you kind of have good foot eye coordination and agility and change of direction. The same you could say for tennis in terms of hand-eye coordination and agility and and and all those sports to name a few.

So you would definitely gain skills from them, but we would look they would probably be more global skills, which will still help in the athletes development. So it's sort of trying to help that branch of what's going to give us specific transferable skills in the sports. There's probably more out there as well, but they are just kind of a few that spring to mind.

But then it's also kind of what sort of global skills can you get from other sports that you might think aren't directly related as well?

Daniel Thompson 00:15:43

Yeah, that makes a lot of sense. Yeah. And for instance, yeah, thinking about the muscle groups potentially that you'll use in your paddlesport for whichever a discipline you paddle in. And, and then what other sports could you do that could help with those muscle groups is one thing but as you said but think globally there is other sports around the gross motor and movement skills that could really help..

So yeah I can understand and think of what you say there. And so based on what you've said there, how could you apply that in other work that our athletes do, such as land based work, for instance?

Ben Lewis 00:16:20

Yeah, that's a good question. It's when you're looking at kind of the S&C programmes particularly for thinking from that kind of long term athletic development, we we're very conscious of a good way to kind of use that S&C and all that land based work is to kind of fill the gap in that physicality. So rather than it just being... what we don't want to do is bring someone to the gym day one and try and train them like they were on the world class programme because it a) it's not relevant and b) it's a very sort of narrow bandwidth like we spoke about earlier. So we very much kind of looking at, you know, you'll hear that sort term of fundamental movement skills and fundamental patterns and from that younger age I'm a big believer that those things should be should be added in to their land-based training.

So what things can can be added in to improve their jumping ability or balance ability or agility, coordination, those sorts of things. So I think it's really important to have those things in and using that land based opportunity as a platform to do that. So so that could be anything from like say developing balance, it could be standing on one leg or things that are going to challenges that kind of skill. It could be anything from having to coordinate different patterns of movement, that are kind of global.

So you'll see in the What it Takes to Progress and ADF there'll be a lots of animal movement patterns, the early stage and the the outcomes from that it's trying to let's say have is a very sort of large bandwidth of physical development. But I do think using the land based training to complement the sport and adding and adding all those kind of things in to kind of top up and fill the gaps from a holistic sort of the point is really, is really important.

Daniel Thompson 00:18:16:23

Yeah, that's good. I can see what you're saying there. It can add to that training to top that what they might need to work on to improve in the areas. And obviously what you mentioned there some of those examples of different exercises are on our Athlete Development Framework so if you go on to the British Canoeing Awarding Body website and search for that there's a number of links of different videos, the different exercises that you were referring to there. So I do encourage people to look at that document and watch some of the videos there.

A lot of coaches and paddlers and parents might think that there is a particular time that I need to specialise because I need that exposure to the sport to be able to progress on to next level. So by this particular age or something, I need to specialise in just the one sport. Is there a particular time that you need specialise?

Ben Lewis 00:19:21

I mean that is that is the killer question and if I figure it out, I could probably go make a lot of money, a lot of money somewhere. And it's such a hard question to answer. And because it's such a it's such a complex process and progress is you know, it's non-linear in nature. You know, you can have athletes who perform very well and then they have growth spurt and they dip and then come back up.

So it's not like this kind of straight nice line trajectory as they go through. I think it's it's one of those things where it's it's it's a relationship between you know those kind of key stakeholders. So from mum and dad to the athlete, the coaches any support staff they might be working working with at the time to kind of look at look at the programme, look where the look where they're currently at.

And it's almost sort of like you've got to dial up and dial down to an area. So like we spoke about that early exposure to the sport is crucial so they can develop the tactical the technical and tactical kind of awareness, but we can build quite a lot of the physicality through that kind of sports sampling and kind of through the sport sampling process.

And as they sort of transition through, their adolescence, it may be a case that you might have to dial up the specificity a little bit. So if we dial up the specificity, then you dial down some of the global stuff. So for example, if it's become apparent from kind of, you know, the coach, the parents, the athlete, they need more time on the whitewater from a slalom perspective than, okay, well, maybe rather than doing two other sports, we might remove that one sport so that opens up more time spent developing and spending time in the landscape, that kind of their choosing to do more work because ultimately it comes down to the athlete as well. As they'll start to find the start to find their feet with what sports they're enjoying, where they see their progress going and what sport they would like to start specialising in.

And I think it's our role to support them in that, educate them in that. And if you kind of refer to some of the stuff that's in the ADF frameworks and the in the What it Takes to Progress frameworks you'll see kind of you see that sliding scale, it's kind of number of hours will be it will be number of

specific training hours will be less and kind of more global training will be more. And as they progress through to adolescence, you'll see that we would expect more hours to take place on that specific training. And we'll dial down the the nonspecific kind of global training as well. But it's there's no sort of magic number that you get to this point and now you want to specialise.

I think it's an evolving process that there's constantly reviewed and evaluated from everyone involved. And again, you can look at historically and you can see trends and some sports will say that when you get to that late adolescence as well, you probably start to specialise a little bit more. And that doesn't mean that you specialise and you don't do any, you know, any other sports at all, but just means your your focus, you know, it starts to kind of get sharpened.

Then you start to kind of dial in on that kind of top end of specificity. But yeah, I would love to give you a kind of do this at this stage and you'll be a world champion, but I'm not in a position to do so I don't think. There might be someone out there who is much smarter than me who can give you a better answer, but that's that's kind of my my thoughts on it currently.

Daniel Thompson 00:22:57

No that that makes perfect sense what you mentioned there and and I think I, I think everything you mentioned in this podcast episode today talking about sports sampling, and the exposure to different sports and the key principles of why, why we would undertake sport sampling and it's really important and key and then work in correlation with your coach and the parents to understand that athlete. Because each athlete's also unique in themselves and for what could work for one person might not work for another person for instance.

And as you mentioned, a couple of those resources and the Athlete Development Framework are some currently on the British Canoeing Awarding Body Website. So please feel free to search for the Athlete Development Framework on there. And then you can see exactly what what you just talked about there Ben. I could talk to you about sport sampling all day, it's been a really interesting topic and I'm going to sort of draw this podcast to a close now and before I summarise and everything Ben, what would be your key take home message to everybody listening to this podcast episode around sport sampling.

Ben Lewis 00:24:17

I think it's it's understanding why you would look at sport sampling. So kind of breaking it down to what we spoke about earlier in terms of the evidence currently suggests that those who've been exposed to multiple sports early on in life tend to transition into that senior world slightly better than those who've specialised obviously there is caveats to that and and I think understanding how the body learns and adapts and you know we use that that tube map analogy and I think trying to visualise that and see how sport sampling will open lots of doors for you and lots of routes and lots of avenues that you can pursue.

And ultimately that leads to kind of reduce some injury risk and decrease in the risk of burning out in sport. So I think that's a key message. I think a final one is, is kind of understanding the context behind why you might look at certain sports. So what are you looking for kind of specific skills or more more transferable skills in sports and what that gives you, versus other sports that might give you more global skills and how that can impact an athlete as well. So yeah.

Daniel Thompson 00:25:33

Great, thank you. To summarise we've talked a lot about sports sampling in this podcast episode and how important it is and how it actively encourages those help with motor learning processes from that physical and neurological perspective that you mentioned there Ben and the evidence that shows how highly effective it is to not specialise too early can prevent early burnout and the risk of injury as well as improve those cognitive and and movement skills which is very, very important.

So thanks Ben for this podcast episode and it's been a pleasure to have you.

Ben Lewis 00:26:15

Thanks for having me.

Daniel Thompson 00:26:17:07

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