

Exploring sport coaching and psychology



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Contents

Introduction and guidance	6
Introduction and guidance	6
What is a badged course?	7
How to get a badge	8
Conclusion	9
Session 1: Exploring sporting success	11
Introduction	11
1 Sporting success	12
2 Your beliefs about sporting ability	13
3 The anatomy of a world record	15
4 Champions talk	17
5 Coaching and psychology in sports performance	18
6 What conversations do coaches and psychologists have?	20
7 This session's quiz	22
8 Summary	23
Session 2: Coaching children: enhancing fun and friendships	25
Introduction	25
1 One sport or many?	25
2 The making of an ice princess	27
3 What does excellent child coaching look like?	28
4 Maintaining enthusiasm in a professional sport	29
5 What does 'fun' mean in children's sport?	30
6 Play the 'Medal Quest' online game	32
7 This session's quiz	33
8 Summary	34
Session 3: Guiding teenagers towards success and life	36
Introduction	36
1 How fast do teenagers grow?	36
2 Why being born in May has its advantages	39
3 What about brain maturation?	40
4 A psychologist's experience of working with teenagers	41
5 Confidence and emotions in teenagers	44
6 I could do that: role models	46
7 This session's quiz	48

8 Summary	49
Session 4: Comparing international level coaches	51
Introduction	51
1 What drives international athletes?	51
2 Comparing top coaches	53
3 What about coaching individual-based sports?	55
4 How would you recruit a team?	56
5 This session's quiz	57
6 Summary	58
Session 5: Mindset and attitudes towards sport and learning	60
Introduction	60
1 Revisiting your attitudes towards success	61
2 Your experience of 'mindset'	62
3 Where do beliefs about ability come from?	64
4 Making it early in sport	67
5 Sports psychologists explain their work	68
6 Psychological characteristics explained	70
7 This session's quiz	71
8 Summary	72
Session 6: Psychological skills for life and sport	74
Introduction	74
1 Chris Hoy's story	74
2 The art of performing under pressure	76
3 Fear and anxiety	79
4 Managing your emotions and anxiety	80
5 Seeing challenge as an opportunity	82
6 Emphasising the familiar: pre-competition routines	83
7 Self-talk before important sporting moments	85
8 Self-talk before penalty taking	86
9 This session's quiz	87
10 Summary	88
Session 7: A fresh look at coaching	90
Introduction	90
1 How do coaches design practice sessions?	90
2 Richard Bailey's 'coaching commandments'	92
2.1 You learn to play by playing the game	92
2.2 Coaching and creativity	93

3 Quality not quantity of practice	95
4 Richard Bailey's other commandments – how to coach	96
5 Final thoughts: a fresh approach?	98
6 This session's quiz	99
7 Summary	100

Session 8: The future of coaching: technological influences 1-02

Introduction	102
1 Where next in coaching and exercise?	102
2 Recovering from intense exercise	104
3 Wearable technology	105
4 How much can we trust what journalists say?	106
5 How to evaluate a claim or innovation	107
6 Examining 'The filter that spots trainability'	108
7 Examining 'Tools to warm up the mind'	109
7.1 Exploring further	109
8 Thinking about where your sport and/or coaching is going	111
9 This session's quiz	112
10 Summary	113
11 Where next for developing your future?	114
Tell us what you think	115
References	115
Acknowledgements	117

Introduction and guidance

Introduction and guidance

This free badged course, *Exploring sport coaching and psychology*, lasts 24 hours, with 8 'sessions'. You can work through the course at your own pace, so if you have more time one week there is no problem with pushing on to complete a further study session. The eight sessions are linked to ensure a logical flow through the course. They are:

1. Exploring sporting success
2. Coaching children: enhancing fun and friendships
3. Guiding teenagers towards success and life
4. Comparing international level coaches
5. Mindset and attitudes towards sport and learning
6. Psychological skills for life and sport
7. A fresh look at coaching
8. The future of coaching: technological influences

This course will develop your confidence and skills for online study, whether this is to explore sport topics or part of your preparation for other study.

You'll start by thinking about your own beliefs about success in sport or fitness and develop your understanding of how coaching and psychology contribute to that success. You'll identify some key coaching decisions that are made with children, leading on towards exploring some principles useful in guiding teenagers and then some of the practices of adult coaches working with international teams. These coaching insights are then combined with exploring the main psychological aspects of sport which often apply to life in general (e.g. handling pressure). You'll conclude by thinking about what the future might hold in coaching and exercise. All these aspects will be explained, so don't worry if they seem unfamiliar at the moment. There are vivid video and audio case study examples to help with this and you'll get plenty of opportunities to demonstrate your new understanding and practise your study skills.

Part of this practice will be the interactive quizzes, of which Sessions 4 and 8 will provide you with an opportunity to earn a badge to demonstrate your new skills. You can read more on how to study the course and about badges in the next sections.

After completing this course, you will be able to:

- outline the influences of, and links between, sport coaching and psychology for those developing their abilities in sport
- describe different aspects of effective coaching and the way in which a coach may influence young people and adults
- compare the psychological characteristics used in sporting careers to those you might need to shape your own future
- reflect on your own sport or fitness behaviours, beliefs and practices and identify useful next steps for further development
- understand and be confident in your ability to study online.

Moving around the course

In the 'Summary' at the end of each session, you will find a link to the next session. If at any time you want to return to the start of the course, click on 'Full course description'. From here you can navigate to any part of the course.

It's also good practice, if you access a link from within a course page (including links to the quizzes), to open it in a new window or tab. That way you can easily return to where you've come from without having to use the back button on your browser.

What is a badged course?

While studying *Exploring sport coaching and psychology* you have the option to work towards gaining a digital badge.

Badged courses are a key part of The Open University's mission *to promote the educational wellbeing of the community*. The courses also provide another way of helping you to progress from informal to formal learning.

Completing a course will require about 24 hours of study time. However, you can study the course at any time and at a pace to suit you.

Badged courses are available on The Open University's [OpenLearn](#) website and do not cost anything to study. They differ from Open University courses because you do not receive support from a tutor, but you do get useful feedback from the interactive quizzes.

What is a badge?

Digital badges are a new way of demonstrating online that you have gained a skill.

Colleges and universities are working with employers and other organisations to develop open badges that help learners gain recognition for their skills, and support employers to identify the right candidate for a job.

Badges demonstrate your work and achievement on the course. You can share your achievement with friends, family and employers, and on social media. Badges are a great motivation, helping you to reach the end of the course. Gaining a badge often boosts confidence in the skills and abilities that underpin successful study. So, completing this course could encourage you to think about taking other courses.



How to get a badge

Getting a badge is straightforward! Here's what you have to do:

- read each session of the course
- score 50% or more in the two badge quizzes in Session 4 and Session 8.

For all the quizzes, you can have three attempts at most of the questions (for true or false type questions you usually only get one attempt). If you get the answer right first time you will get more marks than for a correct answer the second or third time. Therefore, please be aware that for the two badge quizzes it is possible to get all the questions right but not score 50% and be eligible for the badge on that attempt. If one of your answers is incorrect you will often receive helpful feedback and suggestions about how to work out the correct answer.

For the badge quizzes, if you're not successful in getting 50% the first time, after 24 hours you can attempt the whole quiz, and come back as many times as you like.

We hope that as many people as possible will gain an Open University badge – so you should see getting a badge as an opportunity to reflect on what you have learned rather than as a test.

If you need more guidance on getting a badge and what you can do with it, take a look at the [OpenLearn FAQs](#). When you gain your badge you will receive an email to notify you and you will be able to view and manage all your badges in [My OpenLearn](#) within 24 hours of completing the criteria to gain a badge.

Get started with [Session 1](#).

Conclusion

Session 1: Exploring sporting success

Introduction

Your starting point for this course is to look more closely at the range of factors that contribute to sporting success. By exploring the big picture, you will be able to see how coaching and psychology lie at the centre of understanding, taking part in and succeeding in sport.

First, watch the following video featuring Team GB hockey player Alex Danson.

Video content is not available in this format.



Introduction to Session 1

In this session you will read about sporting success and see different people talking about it. You will then be guided through a visual diagram that summarises some of the factors that researchers consider to be the most important influences. You will also consider the part played by coaching and psychology using exciting video footage from two contrasting sports that bring these ideas into sharp focus.

By the end of this session, you should be able to:

- consider how a range of components contribute to sporting success
- identify how coaching and psychology link and interact with a number of these components
- recognise how understanding mental aspects of sport contributes to coaching.

The Open University would really appreciate you taking a few minutes of your time to tell us about yourself and your expectations of the course. Your input will help to improve the online learning experience. If you would like to help, and if you haven't done so already, please fill in this [optional survey](#).

The course is supported and strongly recommended by UK Coaching. Whether you're just starting out or have been coaching for many years you will learn new skills and demonstrate that you have been proactive in your professional development.

1 Sporting success

Are some people born with a genetic predisposition to thrive at particular sports or types of exercise (e.g. power, strength or endurance)? This is one of the most common questions asked in sport, and we often describe someone as 'being a natural' at sport, which is synonymous with being born with the right genes. For example, here is an extract from the autobiography of Spanish tennis player Rafa Nadal, writing about Roger Federer:

He just seems to have been born to play the game. His physique – his DNA – seems perfectly adapted to tennis ... You get these blessed freaks of nature in other sports too.

(Nadal and Carlin, 2011, p. 13)

There is a tendency for some to gravitate towards 'nature' (i.e. fixed, born or genetic) as an explanation of champions' successes because physical attributes are tangible. However, some people think that sporting success is more about 'nurture', or the way they have been developed by coaching and their environment (i.e. champions can be made). What do you think?

2 Your beliefs about sporting ability

You will start this course by considering your own beliefs about the nature of sporting ability.

Activity 1 Your beliefs about sporting ability

 Allow about 10 minutes

Answer the following two questions about nature and nurture in the sport you are most interested in and in sport as a whole. The questions use a 5-point scale, where 1 corresponds to 'strongly nature', while 5 corresponds to 'strongly nurture'. By responding to these questions, you can begin to understand your own beliefs about sporting ability.

For each question, choose between the following options:

1. Strongly nature
2. Slightly more nature than nurture
3. A 50:50 equal mix of both
4. Slightly more nurture than nature
5. Strongly nurture

Type in the relevant number from the scale after the question.

1. What do you believe is the influence of nature and nurture in the sport that you are most interested in? 2. What do you believe is the influence of nature and nurture in all sports?

Discussion

Your response about the sport that you are most interested in is likely to depend very much on the sport itself. For instance, if we asked a group of competitive anglers this question, we might expect the average response to be towards the nurture end of the scale. This is because angling is a heavily skill-based sport in which the interpretation of varied environments is required and physical attributes (e.g. being tall or short) have limited influence. Therefore learning and picking up tips from others is crucial – in other words, their skill has been 'nurtured'. However, consider the sprinting events in athletics, which require distinctive physical characteristics such as fast limb movement, explosive power and perhaps a certain stature. A group of sprint coach's average response might be further towards the 'nature' end of the scale than the anglers.

There is a second important factor: attributional effects. People who do their sport well tend to attribute success to hard work (i.e. they are responsible); people who are not as competent tend to attribute success to luck (e.g. genetics, parents, school).

The way that you answer the second question is fascinating, since you could say 'it depends on the sporting interests of those responding', but it is also likely that deeply held beliefs and values will influence the way you answer. By the end of this course, you may well have challenged some of your beliefs about sport. Soon, we will introduce a new way of collecting peoples' responses to these questions online so if you return you can see how others have responded to this question.

The next section investigates a more complex range of possibilities for explaining sporting success.

3 The anatomy of a world record

The evening sunshine of Gothenburg, Sweden, in August 1995, was the setting in which British athlete, Jonathan Edwards, broke the world record in the triple jump. The record still stands at the time of writing (February 2017). In the next activity, you'll get some insight into Jonathan's circumstances in the build-up to his world record that night, which will help you explore sporting success further.

Activity 2 A giant leap for mankind?

 Allow about 20 minutes

Read the short article [The other giant leap for mankind: how this athlete set a world record that's still standing 20 years later](#). Identify the components of Jonathan Edwards' success. Note down 6–10 words or phrases from the article that suggest these components. Can you group any of them together into different categories e.g. those related to physical or other categories?

Discussion

Some of the main words and phrases are shown in Figure 1. The size or colour of the words has no particular significance other than there are a range of components.



Figure 1 Some of the main words and phrases used in the article.

Your challenge was to begin to make sense of these and you may have identified three main categories in the article:

Category	Contributing words and phrases
Mental	Resilience, coping with pressure, sports psychology, supreme confidence
Physical	Conditioning, rest and recovery
Childhood	Where you grow up, rich mix of different sports

In addition to this, while there are no direct references to coaching: the 'craft of athlete improvement' and 'jumping technique' are obviously both integral parts of a coach's work.

The 'facile nature–nurture debate' was mentioned at the end of the piece. This alludes to nature–nurture being an oversimplification of a complex topic. Richard Dawkins calls this 'the dichotomous mind' – the human tendency to divide up complex ideas into simple either–or positions. Both personality and diet are often presented in this manner, as introvert against extrovert and low-fat diets against high-fat diets, respectively. This reduction of complex arguments also makes it easier for the media to present to a mass audience. In reality, things are never that clear cut, with a range of aspects interacting, especially in sport, coaching and psychology.

Next, you will hear from some sporting champions.

4 Champions talk

In this activity you will hear from champions about what they think has made themselves successful.

Activity 3 What makes champions successful?

 Allow about 15 minutes

Watch the following video and try to identify its main messages. You may find it helpful to listen for the two most commonly used words.

Video content is not available in this format.



Champions talk: what makes a champion?

Discussion

If you group the word **mental** together with **psychology**, it would definitely emerge as the most popular theme. Also, **dedication** and **commitment** were often used, suggesting that the athletes considered drive and motivation as key aspects that they felt separated them from their colleagues; there is plenty of research evidence which supports these opinions. This video reinforces the mental components used to explain Jonathan Edwards' success in Activity 2.

5 Coaching and psychology in sports performance

It appears that psychology as the study of the mind and behaviour is extremely relevant to understanding sporting performance; but how does it link to a range of other factors, including the work of a coach?

In Figure 2, which draws on extensive research from Collins et al. (2016) and Rees et al. (2016), a range of factors that contribute to sporting success are grouped under three headings: the performer, the overall social environment, and training and practice. There is a lot of overlap between each category indicating the links between them. For example, to avoid injuries (the performer), you would consider the type of training being done (training and practice) and the availability of coach/family support (the social environment). This type of diagram is known as a Venn diagram.

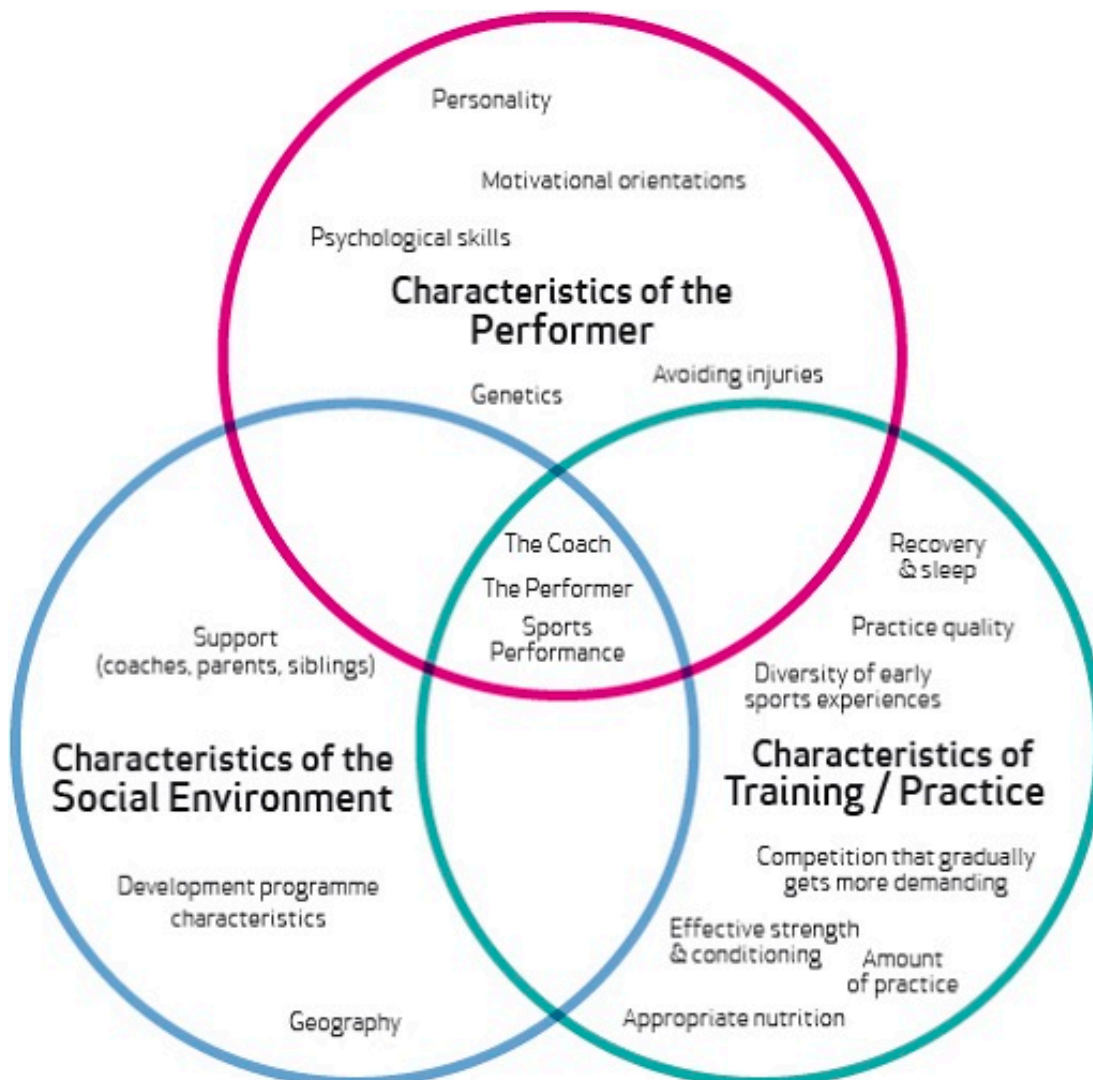


Figure 2 A range of factors that contribute to sporting success.

The prominence of coaching in Figure 2 is evident, since a coach guides most of what falls under the **training and practice** heading. Coaches also influence:

- athletes' recovery, conditioning, nutrition and competition entries

- athletes' **social environments**, by being one of the people who provide support
- athletes in becoming more aware of their motivation and psychological skills.

You may have wondered what is meant by 'personality' and 'motivational orientations' under the performer category. 'Personality' refers to the characteristics that form an individual's distinctive character, while 'motivational orientations' refers to the tendency to be driven to act in certain ways.

Now take a look at what Alex Danson says about this figure.

Alex says ...

There were a huge number of factors that contributed to the success of the GB women's team in Rio. One of the key influences was our coaching team and creating a social environment (culture) that promoted behaviours that drove and improved performance. Danny Kerry forged a team of support staff that had our wellbeing and performance at the front of their minds. We worked closely with a nutritionist, sports psychologist, and a strength and conditioning coach to support our development.

We created a clear vision: 'Be the Difference', 'Create History' and 'Inspire the Future' and a set of values: 'We are One Team', 'We are Winners' and 'Be Alive'. We brought these to life in our everyday behaviours, linking a lot of our language to specific training sessions. For example, on Thursdays we created a session called 'Thinking Thursday', which was a highly competitive inter-squad tournament with the sole outcome of finding a way to win and creating an environment where 'We are Winners'. We would have to perform under fatigue, with changing rules, and come up with a plan that would give our teams the best chance of success. In this example, Danny (the coach) created the environment that put us under pressure and ensured that this training was highly competitive. Creating this environment meant we were able to transfer some of the winning characteristics needed when we reached our Olympic Final in Rio.

Figure 2 is a visual tool to illustrate how a range of factors contribute to explaining sporting success. You could easily add further factors but, as you can see, it has been kept relatively simple at this stage.

6 What conversations do coaches and psychologists have?

In the two activities that follow, you are placed into two very different sporting environments to consider the types of topics coaches and psychologists might discuss.

Activity 4 Injury rehab in rugby: keeping it personal

 Allow about 15 minutes

Watch the following video, which shows two coaches, a sport scientist and a head of medical, outline the technology used with injured players at Saracens, a championship-winning rugby club.

Video content is not available in this format.



Injury rehab in rugby: keeping it personal with devices and data

How does technology support the rehabilitation of injuries and what injury-related topics might the coaches and psychologist discuss off-screen?

.....

Discussion

Devices and data at Saracens contribute to monitoring each individual training load and help design an appropriate intensity of training. In this situation, a coach and psychologist might discuss the balance between physical **challenge** and the amount and type of **support** provided by those around the injured players. If you have ever had an injury, you will appreciate that there is a mental aspect to getting over the injury and fears that it may reoccur. Academic research is increasingly influencing the psychological aspects of recovery.

In this next sporting environment, technology is used to identify and develop talent.

Activity 5 2020 vision: exploring talent development for Tokyo

 Allow 10 minutes

Watch the video [Are these future gold medallists?](#). It features the four-phase Girls4Gold talent identification programme for canoeing, which is aiming to develop female athletes for the Tokyo 2020 Olympic Games. As you watch the video consider:

- i. how coaches, using their knowledge of psychology, designed an environment that was mentally and physically **challenging**
- ii. what those leading the programme were looking for in the athletes.

Discussion

- i. The characteristics of the learning environment were all about providing challenges and learning opportunities in a structured way. The fact that this was held in colder winter months, living and training away from home and learning a new skill in front of others made it more demanding.
- ii. The coaches were looking for the athletes' determination to continue despite setbacks, their willingness to learn and accept coaching guidance and their ability to set realistic goals.

If you are interested in finding out more, take a look at the article [London 2012 champion launches new Girls4gold Talent ID campaign](#).

Alex describes her experiences with regards to the previous activity in the box below.

Alex says ...

Five months before the Olympic Games, I dislocated my thumb, rupturing my ulnar collateral ligament. This required surgery and a 12–16 week rehab period. At the time, my initial thoughts were negative, full of worry and my mind was telling me that I would not make it back in time for Rio. Very quickly, with the support of our sports psychologist, Andrea Furst, and coach, Danny Kerry, I had set myself some challenging goals that would maintain my focus and put me in the best physical shape to aid my return. Working closely with our strength and conditioning coach, Tom Drowley, on a daily programme, I was able to continue with many areas of my physical development.

I completed a monitoring form every morning that Danny, Andrea and Tom could all access, which presented my physical condition, tiredness, wellbeing, motivation and all the training I undertook. This joined-up approach of coaching meant I was well supported and the coaches at all times knew about my training load and my wellbeing. The collection of data and monitoring, as well as good communication between all coaches, was paramount to my rehabilitation. It ensured I still felt part of the team, was supported, made progress and returned on schedule.

You can begin to see that coaching and psychology **interact** when challenge is appropriately applied with individual goal setting. Coaches and teachers can support rich learning environments with good coach/teacher–athlete/pupil relationships.

7 This session's quiz

Check what you've learned this session by taking the end-of-session quiz.

[Session 1 practice quiz](#)

Open the quiz in a new window or tab then come back here when you've finished.

8 Summary

The main learning points of this first session are:

- Sporting success can only be explained as a complex interaction between a range of components, which some writers have grouped under the three categories of the performer, the social environment and training/practice.
- Coaching and psychology link and interact with a number of these components. The examples of injury rehabilitation (Saracens rugby club) and the design of learning environments (Tokyo 2020 canoeists) begin to show some of the potential interaction between coaching and psychology.
- Coaching can be enhanced by exploring psychological aspects of sport: two main examples emerged in this session:
 - Psychology can help develop understanding of how different individuals are motivated.
 - Coaching for better performance can be partly viewed as a balance between appropriate challenge and support.

In the next session, you will explore how fun, friendships and the number of sports you played as a youngster all have an impact on your experiences of sport and likelihood of continuing. However, we all have different interpretations of what 'fun' means in sport, which is why children's sport is so fascinating.

You can now go to [Session 2](#).

Session 2: Coaching children: enhancing fun and friendships

Introduction

Do you remember learning to ride a bicycle and the thrill and enthusiasm that followed when you could? In this session you will consider how to harness and sustain that fun and excitement about learning something new. Your focus here is on children, roughly from 5 to 12 years old, since it is at this age that many lifelong habits and motivations are formed. Your exploration of guiding teenagers and the coaching of adults will follow on from this. You will start by hearing from Michael Johnson and others talking about childhood sporting experiences and then move on to look at some young figure skaters. Children mainly play sport for two reasons: fun and friendship. You will explore this by looking at the inspirational work of a grassroots tennis coach and consider how this also applies to a team sport (football). Finally, you have the chance to have some childlike fun yourself by playing an online game called Medal Quest.

By the end of this session, you should be able to:

- understand the risks of early specialisation in one sport during childhood and the benefits of pursuing a diversity of sports
- identify how different people and researchers explain 'fun' in sport and the coaching implications of this
- recognise how an understanding of children's motivations and encouraging their sense of control over their sporting world is a healthy way of approaching coaching children.

1 One sport or many?

One of the dilemmas that parents, coaches and young people face is whether children should focus on one sport and attempt to excel at it or spread their sporting interest across many diverse sports. This is sometimes called the 'specialisation or sampling' debate. It is a common question in children's sport.

Activity 1 Michael Johnson on early specialisation

 Allow about 15 minutes

Watch the following video with Michael Johnson (multiple Olympic gold medallist in 200 m and 400 m sprints, and former world record holder), where he discusses early childhood specialisation with the author David Epstein and others. The evidence falls strongly in support of the diverse sampling of a range of sports over early specialisation. What arguments from this video might you use if you were talking to a 12 year old or their parent or coach against specialising? Write down some of the key phrases used to help remind you of the main arguments.

Video content is not available in this format.



Michael Johnson on early specialisation

Provide your answer...

Discussion

The key words/phrases you noted might include: 'wrong sport', 'enjoyment/fun', 'injury', 'body awareness' or 'early selection'. Some of these merit a little more explanation. For example, the reference to 'wrong sport' suggests that people are physically or mentally suited to different sports and, by sampling a range of sports, we are more likely to come across the sport most suited to us. In sampling, you also develop a broader range of movement patterns and 'body awareness'. The danger is that 'early selection' of children for specialist training risks killing off the enthusiasm that they will need to maintain for many years if they pursue the sport. Epstein mentioned an uncertainty over the idea of sampling sports applying to golf, but ask yourself this: do 15 year olds win world class adult golf events? The principle to apply here is whether elite adult performance **before** puberty is possible. Junior golfers, to the best of our knowledge, have not won adult major events, but in girl's gymnastics this has occurred (and this success is discussed later in this session).

Those working in sports such as professional football, gymnastics, figure skating and maybe even tennis and golf would have mixed opinions on specialisation versus sampling. In the next section you get a taste of such views.

2 The making of an ice princess

In women's figure skating and artistic gymnastics, teenagers often succeed early because the current scoring systems put performers with small and flexible bodies at a significant advantage. Different rules and scoring systems result in different types of bodies.

Compare, for example, the significantly different physiques of Olympic artistic gymnasts (short and powerful) and rhythmic gymnasts (taller and more slender). At the Rio 2016 Olympic Games, 16-year-old artistic gymnast Amy Tinkler was Great Britain's youngest medallist. She is only 1.46 m (4 feet 10 inches) tall. Sporting success can, in some cases, be achieved before puberty.

In 2016, the BBC followed young child athletes Lily, 11, and Genevieve, 12, and their families as the young athletes pursued their dreams of becoming 'ice princesses' in competitive figure skating.

Activity 2 Children, coaching and choices

 Allow about 15 minutes

Watch the following video featuring Lily and Genevieve. Look for the way Lily and Genevieve interact with their family and coach. How do the girls speak and react to those around them? It is thought that these interactions influence aspects of motivation.

Video content is not available in this format.



The making of an ice princess

Discussion

The level of commitment to training at such a young age might be a little unsettling to watch for some. You mostly saw Lily on the ice and it appears that she is self-motivated, with parents who facilitate her training. The tone of her interactions and behaviour with her coach appears to be warm.

In contrast, Genevieve appears to be shy with a closely involved mother who contributes to coaching. Her mother says that aspects of their parent/child relationship can be hard to balance in relation to sporting matters. It is not clear how much autonomy or control over her sporting world Genevieve has: in the clip her mother appeared to push her.

A video of children training intensely gives us an opportunity to reflect on the purpose and outcomes of children's sport. Research suggests that a balanced life in sport, education and with peers/family is ideal.

You can perhaps understand why there are minimum age limits for senior international competitions in figure skating (15 years) and gymnastics (16 years).

3 What does excellent child coaching look like?

Whatever the situation, whether at grassroots or elite sporting levels, if you are interested in sport, it is worthwhile knowing what excellent childhood coaching looks like.

Activity 3 The magic of a holistic tennis coach

 Allow about 25 minutes

Justin Cahill is a qualified Physical Education teacher from the USA with over two decades of experience. Read his blog post [10 keys to unlock your coaching potential](#), based on watching a tennis coach (Coach Z) in action with his own children. What does Coach Z do that warrants him being described as 'inspiring' and 'special' by Cahill?

.....

Discussion

He seems to be special due to his **holistic** approach in trying to develop the whole person, not just the aspiring tennis player. He is teaching character (respect for societal rules, integrity and empathy for others), connection (positive bonds with people in sport), compassion and confidence whilst also providing challenges for the young people to rise to. The inspiring aspect is perhaps due to a **magical** combination of enthusiasm, knowledge and a caring approach. Perhaps if all coaches were able to be so effective, more children might maintain their zest for sport. This mirrors UK Coaching's ['C' system](#).

The question of how this approach might also be applied to other sport is interesting. How can coaching young people for success avoid becoming too serious and maintain their youthful enthusiasm?

4 Maintaining enthusiasm in a professional sport

Think of young people training towards some professional team sports, especially football, tennis and golf. Organisations and clubs often attempt to identify promising young players before puberty: an almost impossible task to get right (Bailey, 2015). This can result in children sometimes undertaking formal coaching starting at 8–12 years old. In football, this happens across all English Premier League (EPL) clubs, as there is often a perceived parental prestige from a child being recruited to an EPL academy. Notice how adult ego might interrupt childhood enthusiasm.

Activity 4 Football academies main focus

 Allow about 15 minutes

Listen to this clip from a telephone interview with Ged Roddy (Director of Youth, EPL). What are his two main points about maintaining youthful enthusiasm in the training of children in football?

Audio content is not available in this format.



Kick off: science of high performance special

Discussion

One clear message Roddy describes is maintaining a passion for their sport, but he does not specifically describe how this is done. Alongside this, he identifies creating a thirst for learning as being important throughout a successful professional career. This links to a 'growth mindset' (Dweck, 2012), which you will explore further in Session 5.

You probably know intuitively that enjoyment of sport and training is key to motivation but, apart from the inspiring tennis coach you read about earlier, you have yet to clearly see how fun and enjoyment is created in children's sport.

5 What does 'fun' mean in children's sport?

Various people other than Coach Z have tried to answer the above question – often by talking to children about their experiences. Nick Levett, from the English Football Association, has carried out detailed research asking 10-year-olds around England why they play football. One of his tasks was to ask children to make choices between 16 statements. See if you can identify the top six from his survey.

Activity 5 What would 10-year-old children choose?

 Allow about 10 minutes

The 16 statements that Nick Levett used are stated below. Identify what you think are the top six reasons that children chose as the most important things for them about why they play football and select the checkboxes for those reasons below.

- ☐ I like playing matches against other teams
- ☐ I love scoring or stopping goals
- ☐ I like to show off my skills
- ☐ I love playing football because it's fun
- ☐ It's a really good game and I love it
- ☐ I like skilling people
- ☐ It's important to me I win the league
- ☐ Trying my hardest is more important than winning
- ☐ I like learning new skills
- ☐ I like playing football with my friends
- ☐ I play because it makes my parents happy
- ☐ It's important to me I try to win matches
- ☐ It's important to me I win trophies and medals
- ☐ It helps keep me fit and healthy
- ☐ Winning is more important than trying my hardest
- ☐ I like meeting new friends through football

Discussion

It is revealing that the children are driven by internal motivators and not by winning or trophies. Two of the statements in the top six are about children's friendships, so making connections and sharing experiences with others is equivalent to fun and enjoyment for them. Levett found that the children's top answer by far was that trying their hardest was more important than winning. How do you think this compares to the values that an adult brings to game day?

If you want to read Levett's excellent article on how he did this research and what it tells us, you can read it on his blog: [Children and some reasons behind 'Play'](#).

Research shows that children's motivation to play sport is significantly influenced by their age. Younger children tend to be mainly interested in the hedonistic, or pleasurable, aspects of moving and playing. As you have seen, older children place more importance on learning new skills and being with their friends. So, all the children talk about **fun and**

enjoyment as important reasons for playing sport, but evidence suggests that they probably mean quite different things by those simple words (Bailey, 2017).

This advice is increasingly being passed on to coaches. Watch this video from UK Coaching to see this in action.

Video content is not available in this format.



UK Coaching animation

6 Play the 'Medal Quest' online game

Here you can play Medal Quest, an online game developed by The Open University. It presents ten mentoring dilemmas between ages 10 and 20 relating to guiding either a gymnast (Kade), a swimmer (Ivy), a footballer (Zoe) or a Paralympic runner (Andrew). Open the game by clicking on the thumbnail below or clicking on 'View'. Open it in a new browser or window.

Interactive content is not available in this format.



You have already explored specialisation and enjoyment, so you should feel comfortable with the first few questions. The game then moves onto other areas which you will need to use your own judgement for. These areas will be covered in later sessions.

You will see the impact of each decision in the measures of '*Early success*' (i.e. U17), '*Chance of injury*', '*Long-term prospects*' and '*Motivation*'. Depending on the thresholds reached, a player either reaches a championship final between the ages of 16 and 20, or has to retire early from the sport, with a few different outcomes in between.

By playing this game you will reinforce your understanding that coaching should be stimulating and fun and your understanding of the fine balance between challenge, to stimulate improvement, and being appropriately supported. You will have an opportunity to return to the game later in the course, by which time you will have explored some of the game's other underlying principles.

7 This session's quiz

Check what you've learned this week by taking the end-of-session quiz.

[Session 2 practice quiz](#)

Open the quiz in a new window or tab then come back here when you've finished.

8 Summary

The main learning points from this session are:

- The risks of early specialisation in one sport during childhood are:
 - that the enthusiasm and joy of sport can be lost
 - that the chances of injury or a loss of sustained engagement are heightened.
- The benefits of sampling a diverse range of sports are more likely to lead to a positive experience of sport.
- Fun and friendship are the two main reasons children do sport and the coaching implications of this are that holistic personal development of a child's character (respect for societal rules, integrity and empathy for others), connection (positive bonds with people in sport), compassion and confidence should inform each session, as demonstrated by tennis Coach Z.
- Asking children what they enjoy about sport can give a valuable insight into their motivations; a consistent research finding is that encouraging their sense of control over their sporting world is healthy for their long-term development.

In the next session, you will be considering how coaches try to guide those who are slightly older (i.e. teenagers). You'll be examining the implications of physical changes, the impact of different rates of growth and some intriguing recent insights into the mysterious workings of the adolescent brain.

You can now go to [Session 3](#).

Session 3: Guiding teenagers towards success and life

Introduction

Do you remember your adolescence and some of the difficult issues you had to navigate (e.g. identity, motivation, failure, comparisons with others)? In this session, you will focus on principles that underpin coaching and guiding teenagers (aged 13–20 years old).

You start by considering the impacts of physical growth in these years, before moving on to consider mental development with the help of a psychologist who works in schools and on the sports pitch. You also hear perspectives and evidence from an influential former physical education (PE) teacher.

Watch the following video featuring Alex Danson.

Video content is not available in this format.



Introduction to Session 3

By the end of this session, you should be able to:

- recognise the influence of teenage growth and maturation on selection in sport
- consider how the teenage brain is evolving and how an understanding of this can help when working with teenagers
- identify how self-control, confidence and emotion are key topics for those working in sport, or with teenagers, to explore further
- describe the potential influence of role models on young people's behaviour and aspirations.

1 How fast do teenagers grow?

We all know that teenagers grow quickly, but are there patterns to growth during the teenage years? Are there variations?

Working with teenagers is stimulating because they experience so many changes taking place. It is important to fully understand teenage growth **beyond** the well-known truism that girls mature faster than boys, since it has implications in terms of training, selection and potential for injury.

Activity 1 Investigating height and growth

 Allow about 15 minutes

In this activity, you are asked to interpret a graph. Look at the graph in Figure 1, which shows the typical height gain per year for boys and girls through childhood and adolescence. The vertical axis shows the height gain in centimetres per year, while the horizontal axis shows the age in years. So you can see that at aged five, the average number of centimetres gained in a year, for both boys and girls, is 5 cm.

1. What is the graph saying about the time of the teenage surge in growth?
2. The lines on the graph are very precise. How normal do you think this is?

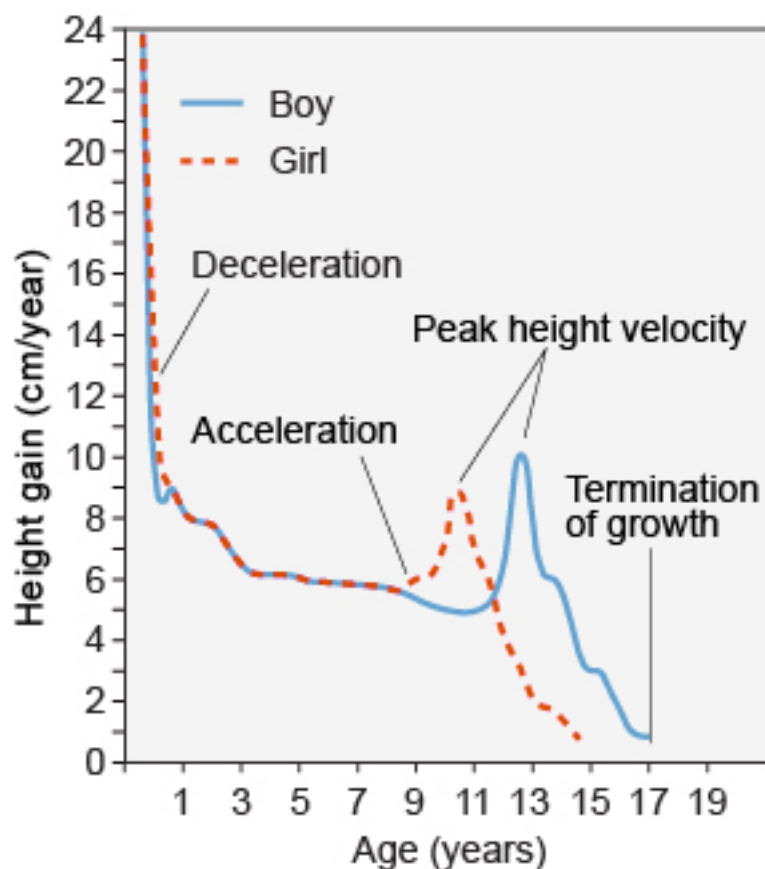


Figure 1 Growth in height for boys/girls age 0–17 years

.....
Discussion

1. A label of 'peak height velocity' draws our attention to the maximum surge in growth, with a striking difference in the lines between boys (blue) and girls (red). The duration of this period of accelerated growth, called the **adolescent growth spurt**, is usually greater in boys than girls, although there is considerable variation. In girls, this typically occurs around 10 to 13 years of age; in boys, it occurs between 12 and 15 years of age. On completion of the adolescent growth spurt, men are, on average, taller and heavier than women. This is typical of all cultures and ethnicities. The graph suggests that peak height gains can be in the region of 10 cm/year, which are quite substantial changes, particularly in any activity where size is important.
2. The line is changing but irregular. We have to assume that this is an average among a number of young people. Most people differ from such an 'average'.

You will know that often there are early or late developers who fall outside of the line in Figure 1. Add to this the potential impact of having an early (i.e. September) or late (i.e. August) birthday and enormous differences in size/power can be evident: often sporting 'talent' gets confused with physical development.

2 Why being born in May has its advantages

You may have heard of the influence of the date of birth on academic/sporting performance during the teenage years and beyond in certain sports. It is known as the relative age effect (RAE). The RAE refers to the developmental, practice time and physical advantages that an autumn birth date, immediately after the academic year cut-off (1 September), often confers.

However, Nick Levett, whose work you came across in Session 2, explains why he is pleased his son is born in May (late in the school year). He reasons, and this is backed up with research, that a relatively young player in their age cohort (i.e. a May birthday) gets some advantages:

- they have to be a better learner to survive against the older players
- they solve problems in different ways and come up with creative solutions as they don't have a physical advantage to use
- they develop coping and adapting strategies that will serve them well in later years (Levett, 2012).

These are valuable skills that a relatively young player can develop. In the long term, these skills may outweigh any early physical dominance and, with determination, they can thrive (Levett, 2012).

Nick Levett published an article on his blog that [explains more about RAE](#). A child born in May can develop the qualities he describes. However, this will only happen if they are retained within the sport and they have the grit to carry on, despite losing some physical battles with their bigger peers. If their May birthday means that they are repeatedly left out of teams or physically intimidated by relatively older children, then they will develop none of these qualities.

Detailed academic evidence from rugby and cricket academies also exists. If you want to see the abstract (a very brief summary of an in-depth analysis) of this research, you can view [Start hard, finish better: further evidence for the reversal of the RAE advantage](#).

3 What about brain maturation?

Now you move from physical to brain development. Does the brain develop at a similar rate to the rest of the body?

Until the late 1990s, it was assumed that most brain development takes place early in life. Recently, with advances in brain imaging technology, such as magnetic resonance imaging (MRI), neuroscientists like Sarah-Jayne Blakemore have started to look inside the living human brain.

In a widely viewed online talk called [The mysterious workings of the adolescent brain](#), Blakemore (2012) describes how the brain undergoes dramatic development into the early 20s. This is thought to correspond to connections between cells (synapses), in which those:

... that are being used are strengthened ... You can think of it a bit like pruning a rosebush. You prune away the weaker branches so that the remaining, important branches, can grow stronger, and this process, which effectively fine-tunes brain tissue... is happening ... during adolescence.

(Blakemore, 2012)

The news that the brain continues to develop for a long time after the rest of the body is surprising, and psychologists are starting to understand the implications of this.

4 A psychologist's experience of working with teenagers

Here you can see psychologist [Bradley Busch](#), who works with teenagers in schools and on the playing fields, talking about some of the implications of teenagers thinking differently to adults.

Activity 2 Bradley Busch explains his work in schools

 Allow about 10 minutes

Bradley Busch runs workshops in schools with teenagers where he discusses their developing brains in relation to decision-making and judgement. In this video, he is interviewed by The Open University's Ben Oakley about the main talking points teenagers respond to in those workshops. What are the three main things that engage teenagers?

Video content is not available in this format.



Interview with Bradley Busch (Part 1)

Discussion

The most common topic that teenagers discuss is about their **self-control** (control of impulses). Bradley talks about people having different approaches to how much they can persist at something for an eventual reward (delayed gratification). Studies have shown that this is a key life skill. Teenagers often identify how they can easily get distracted and give in to impulses. Removing distractions to help them keep on task was one practical tip Bradley raised, and it is clear that sticking at revision or practice over time is an important aspect of those who wanted to progress in education or sport.

The second topic is thinking about how sensitive the teenage brain is to social status and the influence of **peer pressure**, and how this can often dominate actions. The example of smoking was given in which, if they are alone, teenagers may not make certain decisions, but in the company of their peers they often choose differently: there is a link here to self-control with regards to being distracted from original intentions.

The third topic is handling **failure or mistakes**. Bradley Busch suggested a tip for schools, and coaches, is to create an environment in which mistakes are not mocked or criticised: a place where it is safe to fail as part of learning and questions such as 'what would I do differently next time?' are posed.

This interview could have covered a lot more ground but this infographic (Figure 2) summarises Bradley Busch's ideas on what coaches/teachers can do when they know how the teenage brain is different. Examine each of these five recommendations.



Figure 2 Teenage brain is different infographic.

If you want to find out more, read his 2015 Guardian newspaper article:

[Secrets of the teenage brain: a psychologist's guide for teachers](#). You will see Bradley Busch again shortly, as you hear his thoughts on confidence and emotions.

5 Confidence and emotions in teenagers

As you have seen, teenagers often compare themselves to their peers and their identity is often uncertain and evolving. Listen to this example of teenager Rachel, her younger brother Oliver and their mother talking about the ups and downs of teenage life when you start secondary school.

Audio content is not available in this format.



In secondary school we have a lot more responsibility

This family talked about drawing on determination, humour and confidence in coping with the ups and downs in education, sport and life.

In this next activity, Bradley Busch explains what his main topics are when working with teenagers in sport: confidence features strongly. Keep the voices of Rachel and Oliver in mind as you do the activity.

Activity 3 Bradley Busch's top teenage topics in sport



Allow about 10 minutes

In this video, Bradley Busch describes the two most common topics he is asked to address with teenagers in sport. Summarise the two main points he makes, including the practical guidance he gives.

Video content is not available in this format.



Interview with Bradley Busch (Part 2)

Discussion

Confidence frequently features in Bradley Busch's dialogue with teenagers in sport, in a similar way to how Rachel mentioned this in the family audio clip. Whilst adults have often heard about the advice of focusing on controlling the controllable features of performance, this is a new concept for many teenagers and one he says they find particularly useful.

The other common topic is controlling **emotions** (e.g. nerves or frustrations) in sport. He explained how he encourages people to think about situations as less threatening and framing them as opportunities. This includes encouraging people to have less regard for what other people might think about them and to focus on their own competition routine and performance.

You will further explore psychology, confidence and emotions in Sessions 5 and 6.

Working with young people can be very rewarding due to their variety and rapid progress. Those experienced with guiding teenagers know that they can often call on a powerful tool to help them: the inspirational effect of someone being a model for what is possible. It is this you turn to next.

6 I could do that: role models

Who inspired you in your teenage years as a role model? Research shows that role models are particularly effective if they have regular contact with those who seek to emulate them. This begs the question: is fame and public recognition the most powerful type of role model?

Activity 4 Peers as role models in PE

 Allow about 10 minutes

The clip below features a radio interview with Ali Oliver, Chief Executive of the Youth Sports Trust, talking about how to inspire young girls in PE. Why does she think **peer role models** of a similar age can work well?

Audio content is not available in this format.



Interview with Ali Oliver

Discussion

Ali Oliver has a lot of experience of working with teenagers, and she makes the distinction between role models such as a PE teacher or elite sportsperson, who represent a certain way of engaging in sport, and bottom-up **peer role models**. She thinks the latter have far more of an influence over teenagers. Interestingly, research supports her opinion: those who are 'like us' are far more powerful role models.

Have you ever seen someone like you achieve something and thought 'I could do that'? Read Box 1 for detailed advice about how behaviour is often modelled by others.

Box 1 The power of modelling

The academic evidence shows that the power of behaviour and attitude from 'someone like me' means that often the most influential role models are those with similarities. For instance, someone:

- from your locality
- doing the same sport event
- who plays the same position in a team sport
- of your generation (i.e. up to a few years older)
- of similar ethnicity
- who attended the same school or club.

If you want to find out more about this, read [I could do that: why role models matter](#).

The modelling of behaviour, attitudes and beliefs can be very powerful in adolescence. Consider how you react to public errors that you make (whether that's in your role as a **coach**, **teacher** or **parent**). You may not realise it, but you are showing a possible way of responding to mistakes. What happens if a similar behaviour is reinforced again and again as a teenager watches? Do not be surprised if they respond in a similar way.

This suggests that we all need to be careful to practise what we preach as a parent, coach or trainer: modelling has powerful effects.

7 This session's quiz

Check what you've learned this session by taking the end-of-session quiz.

[Session 3 practice quiz](#)

Open the quiz in a new window or tab then come back here when you've finished.

8 Summary

The main learning points from this session are:

- Increased knowledge of the different teenage growth rates over time and the possible impact of the relative age effect on selection and progress. This included details of how players born later can eventually thrive through learning important coping strategies.
- A realisation that the brain continues to evolve into the early 20s. This has implications for self-control and decision-making/judgement.
- Those guiding teenagers can support their work by exploring self-control, confidence and emotion in greater depth.
- Teenage behaviour often responds to models of significant others such as parents, teachers and coaches but the most powerful impact is likely to be from peer role models.

In the next session, you will be turning your attention to coaches. We are lucky to have behind the scenes interviews with three national coaches: one is from Sweden, another is from the USA and a third is from Germany. This brings an international flavour to the course and with examples from rowing, football and swimming, you will see some interesting comparisons as to why coaches in different sports are effective.

You can now go to [Session 4](#).

Session 4: Comparing international level coaches

Introduction

You continue your exploration of coaching and psychology by looking at what approaches have proved effective with international adult athletes. By looking behind the scenes at this top level, you will start to understand what drives athletes, how coaches might best support experienced athletes and how some of these ideas might transfer to your own learning journey.

Coaching full-time squads is a tough job and there is no one-size-fits-all approach; each coach will bring their own style and practices. In this session, you listen to three top coaches talking about their work; concentrate on comparing and contrasting their different approaches and philosophies. They give unique insights beyond the sound bites of standard media interviews and you should be able to relate some of what they say to your own experiences of learning.

By the end of this session, you should be able to:

- identify common themes in the coaching approaches and philosophies of the three coaches
- recognise that a traditional style of coaching in which the coach holds all the knowledge is increasingly being challenged by alternative types of coaching in which there is a more balanced relationship between athlete and coach
- explain how encouraging appropriate attitudes, beliefs and approaches to learning are important aspects of a coach's work.

1 What drives international athletes?

How do you develop a good grasp of the needs of those you are working with and, in particular, the different things that motivate their work week in, week out? To be an effective coach or teacher at any level, this is an important aspect to think about. If you can explain what drives you at a personal level, this self-awareness is useful in helping navigate work and life.

Activity 1 Heart and soul in rowing



Allow about 20 minutes

Watch this video which examines why rowers love their sport and what motivates them. You may find it helpful to watch the video more than once, to pick up on things you miss the first time you watch it.

Video content is not available in this format.



Hearts row to Rio



- i. Identify phrases used under three main categories: **mastery of skills, the sport's environment** and **being with others**.
- ii. Think about your own experience of being coached or coaching and what athletes would say if you made a similar video for your sport.

Discussion

- i. The video links to what you saw in Session 2 about fun and enjoyment in children's sport, but there is considerable nuance amongst these athletes because they can express themselves very well. Here are some of the things that may have stood out for you under each category, which also coincide with research about motivation.
Mastery of skills: the feeling of the movements when carried out optimally was mentioned often and the ambition of what they were attempting is perfectly represented by, '[it is] elegant and precise, but powerful and delicate but strong'.
The sport's environment: the outdoor surroundings and the tranquillity of being 'free' in open space was a recurring theme.
Being with others: the special atmosphere of being part of a well-functioning team, which includes supporting each other and developing strong bonds, was important for some.
- ii. If videos were made for other sports, the evidence suggests that sports participants would also talk about mastery, as most other top athletes focus on working towards an elusive personal best performance. Those in team sports are likely to talk about the social aspect of being together and shared experiences.

2 Comparing top coaches

Those coaching international teams will be more successful if they can support athletes in meeting their needs, such as those described previously. Good coaches are also likely to be consistent, as their work is underpinned by a clear set of beliefs and values and what some might call a 'coaching philosophy'. You start your comparison by looking at two coaches working in the most popular team sport in the world, football.

Activity 2 Pia Sundhage (Team USA and Sweden)

 Allow about 30 minutes

First listen to some fascinating insights from Pia Sundhage. Sundhage is one of the world's top women's football coaches, having led Team USA to two consecutive Olympic gold medals. She then coached the team of her own nation of birth, Sweden, to a silver medal at the Rio 2016 Olympic Games.

Audio content is not available in this format.



Interview with Pia Sundhage

She talks about how she managed the severe discord in the US team when she took over and the way she develops and uses 'team goals'. Note, that when she mentions 'the role' and respect for it, she is talking about individual roles as part of the team jigsaw.

If you had to describe the characteristics of her approach to coaching, how would you do this? Your summary of her approach will be invaluable when you come to compare it to other coaches in a moment. You may find the transcript (under the audio's play-bar) useful.

Discussion

Listening and open communication, which together lead towards trust, might be one way of summarising part of her philosophy. She also talked about how shared team goals need to be discussed and often act as a reference point. When talking about her 'coach healthy' approach, it seemed to be mainly about inspiring players to reach towards being better rather than overemphasis on what mistakes they made. The research evidence supports her observation that creating an environment that players want to belong to, and one in which everyone can improve, is a valuable approach

Now that you have some insight into Pia's coaching, let's start to compare this with another top football coach, Jürgen Klinsmann.

Activity 3 Jürgen Klinsmann (Germany and USA)

 Allow about 20 minutes

Listen to a short clip from Jürgen Klinsmann (coach for Germany and the USA at successive World Cups).

Audio content is not available in this format.



Interview with Jürgen Klinsmann

Klinsmann makes comparisons between football and American team sports such as baseball, basketball and the NFL. Interestingly, like Sundhage, he also mentions conflicts within teams.

What similarities and differences can you detect in his approach compared to Sundhage's?

Discussion

Klinsmann makes some interesting observations about players being the main decision makers on the pitch and that coaches in football have limited opportunities to direct play, which contrasts with the American team sports that have numerous time-outs. So, one key similarity is that both Klinsmann and Sundhage are trying to encourage players to take responsibility on the field, which is supported by academic research. They also want players to take responsibility for their own learning and improvement.

Klinsmann describes how there is no perfect coaching tone or approach since every coach and player is different. Like Sundhage, he talks about trying to resolve conflict through talking, but he also mentions the situation of sometimes using the ultimate sanction of removing one party from a group if a conflict is too deep-seated.

In neither of these interviews did these coaches present themselves as a coach who directs and tells players what they should do. They suggested that they guide the group of players and try to create a team environment that encourages self-motivation and responsibility to keep on learning.

3 What about coaching individual-based sports?

Next, you will hear from Teri McKeever, who has been a swimming coach at the University of California for almost 25 years. She is one of the most successful coaches in the world and is known for her innovation. For instance, her idea of swimming training is one that also uses yoga, skipping and dancing to hip hop music. It was with these types of methods that led to her becoming the first ever female coach of the 2012 US Olympic women's team (they won 14 medals).

Activity 4 Coaching connections or contrasts?

 Allow about 25 minutes

Listen to the interview with Teri McKeever below. As you listen, think about the comparisons between her approach to personal coaching and those of Pia Sundhage and Jurgen Klinsmann. As a reminder, both Pia and Jurgen talked about players taking responsibility and making their own decisions in competition. Note down some of the key terms that she uses to describe her approach. To what extent are there connections or contrasts between the approaches of these three coaches?

Audio content is not available in this format.



Interview with Teri McKeever

Discussion

The list of terms that we noted were: 'environment', 'athlete problem-solving', 'empowered', 'learning', 'training quality', 'mind-body connection', 'partnership' and 'different training being fun'. The first four of these terms were points of **connection** and similarity to themes mentioned by Pia Sundhage and Jurgen Klinsmann. Perhaps all three coaches have a view of a coaching model where 'I have information, the athlete has information and we're partnering in that' (*The Documentary*, 2014). The research evidence on effective coaching mirrors these views.

One of the striking **contrasts** (differences) with Teri McKeever was her willingness to be creative and try out different physical training methods. She observed how an athlete's mindset to approaching new tasks could often be revealing. She talked about a characteristic of quality training being how she asks athletes to use their imagination to connect emotionally, physically and mentally to 'race time' in their sessions. This is all part of her view of the interconnection between mind and body. She concludes 'there's more than one way to be successful at the highest level' (*The Documentary*, 2014).

These interviews and research evidence reinforce a view of coaching not being formulaic, but something that is incredibly diverse, with one of the main attributes being that coach's respond to the individual, while also shaping the environment and the task.

4 How would you recruit a team?

Some coaches have the luxury of being able to identify and then recruit those that best fit the group ethos. This is true for professional sports teams, for example. How would you do this? Would you look for physical attributes (e.g. size, fitness)? Their performances as a developing athlete? Their mental attributes? Or the right 'mix' of athletes to make the best team?

Teri McKeever is also in the recruitment field with many potential swimming scholarship students applying for the University of California. This next activity describes Teri's approach using a case study in a business-related publication.

Activity 5 Selecting for your team

 Allow about 20 minutes

Read the short section titled '[Selection and Recruitment: Finding the Right Fit](#)' from [Schroth's \(2013\) case study](#). This short reading mentions 'home visits', as Teri McKeever's assistant coach, Cunnane, meets parents and athletes at home as part of their information gathering.

Identify which sentence of the reading best summarises their approach to recruitment? Is there anything you consider to be unusual in their approach?

.....

Discussion

There are a few sentences that you might have identified as providing the best summary. We identified this sentence as one of them, 'they look for independent, smart, and hardworking athletes who have good self-insight, want to learn, and are willing to grow as people'. Did you identify this sentence too? This approach emphasises independence, self-awareness and diligence qualities useful not just in sport, but in life.

The unusual aspect was how they looked out for mental attitude and holistic life skills being a key factor in making choices. For example, over-involved parents or an indulgence in text messaging by the athlete indicated they may not be selected.

Mental aspects of sport and broader learning skills, including mindset, are something that are explored in more depth in subsequent sessions.

5 This session's quiz

Now it's time to complete the Session 4 badge quiz. It is similar to previous quizzes, but this time instead of answering five questions there will be fifteen.

[Session 4 compulsory badge quiz](#)

Remember, this quiz counts towards your badge. If you're not successful the first time, you can attempt the quiz again in 24 hours.

Open the quiz in a new tab or window then come back here when you've finished.

6 Summary

Congratulations – you have reached the halfway point of the course.

The main learning points from this session are:

- The common themes in the coaching approaches of the three coaches were how they encouraged athletes to take responsibility and make their own decisions. The terms 'athlete problem solving' and 'empowered' were used by each coach. McKeever, in particular, spoke about quality training.
- A traditional style of coaching, in which the coach holds all the knowledge, is increasingly being challenged by research that suggests alternative types of coaching, for example, where there is a more of a balanced partnership between athlete and coach.
- These coaches don't just coach technical skills, but also spend a lot of time encouraging appropriate attitudes, beliefs and approaches to learning.

Join us on Facebook

We have created a Facebook page, [Succeed at OU sport, fitness and coaching](#), in which you can discuss aspects of the course further.

You can use this space to comment on your experiences so far and respond to any of the other questions from this course. You will benefit by developing your understanding of the topics in the course, and you will be able to ask any questions to our experienced staff – Ben Oakley, Ben Langdown or our team of sports psychologists.

Interacting with others on the course will also allow you to benefit from new online material or opportunities (jobs, training other networks or development events) that others identify and allow you to view perspectives beyond your own sport. In fact, you will probably be able to find the answer to many things connected to sport, fitness or coaching.

When posting remember to introduce yourself by telling others where you are from, your main sporting interests and any plans you have for further study or training.

On this Facebook page, you'll find opportunities to discuss things like:

- How can I find out more about sports psychology?
- I'm interested in working towards being a PE teacher. What are my options?

In the next session, you will explore sports psychology in more detail. There is some very interesting evidence that demonstrates that how you think about learning and sporting performance has an impact on the outcomes.

You can now go to [Session 5](#).

Session 5: Mindset and attitudes towards sport and learning

Introduction

You have started to see how experienced sports coaches, and some workplaces, encourage people to think about their training and progress in certain ways (e.g. personal responsibility, learning, problem solving). The term 'mindset' has often been used by contributors to this course: but what is meant by mindset?

This session specifically considers sports psychology. In addition to mindset, you will explore the mental characteristics of those developing in sport and begin to see what topics sports psychology address with athletes and their coaches. Your work in sports psychology will continue in the next session.

A lot of the knowledge and skills used in sports psychology can often be applied to situations that you are familiar with beyond sport. You will be able to apply much of what is discussed here to your own experiences or those close to you.

Watch the following video featuring Alex Danson.

Video content is not available in this format.



Introduction to Session 5

By the end of this session, you should be able to:

- describe the features and beliefs of a growth and fixed mindset
- identify the role of feedback from coaches, teachers and parents in influencing beliefs about ability
- describe mental toughness and the psychological characteristics of those athletes developing towards excellence and how these ideas contribute to your understanding of sporting success.

1 Revisiting your attitudes towards success

In Session 1 you completed a short questionnaire about your attitudes towards nature and nurture in sport. At the time, you were told that it is 'likely that deeply held beliefs and values will influence the way people answer'.

Educational psychologist Carol Dweck and others have investigated the nature of deeply held beliefs about ability and how these influenced the way children learn. Her book *Mindset* (Dweck, 2012) has resulted in 'growth mindset' and 'fixed mindset' becoming increasingly used terms. What is meant by these terms will be explained shortly.

Her research made many of those working in education and sport realise that some people avoid challenging situations where they might fail, while others embrace challenge as an opportunity to learn.

2 Your experience of 'mindset'

Carol Dweck has found that people generally hold one of two firm beliefs about their ability: they consider it to be either a fixed trait or something that can be improved over time with effort. She calls these the **fixed** and **growth mindsets**, and there is persuasive evidence that mindset can seriously influence performance in the long run.

If you want to see how she came to these conclusions, the video

[Carol Dweck: the effect of praise on mindsets](#) summarises some key experiments using puzzles with schoolchildren that shaped her theory (Mueller and Dweck, 1998).

Activity 1 Explore mindset from your own experience

 Allow about 10 minutes

Failure, mistakes and feedback are part of the DNA of sport and, as you saw in Session 3, they are also a feature of education and the teenage years. Figure 1 summarises Dweck's theory. To what extent do you recognise the different approaches to challenges, obstacles, effort, criticism and the success of others?

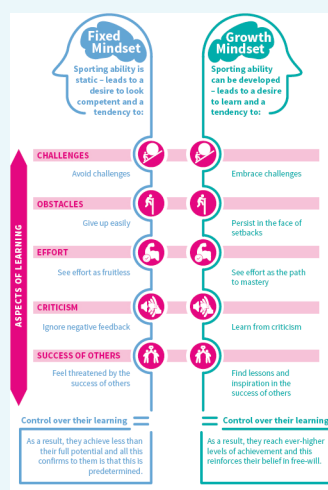


Figure 1 The tendencies and likely results of fixed and growth mindsets

Discussion

The different approaches to aspects of learning in the left-hand column provide some attitudes and behaviours that you may have encountered. They can either hinder or help learning, although it might not be quite as clear cut as a fixed or growth mindset as is shown in the table. Notice how in the 'success of others' row, there is a strong connection to what you learned in Session 3 about role models: 'finds lessons and inspiration in the success of others' clearly describes the potential impact of role models.

Some of the things Bradley Busch said about mistakes and failure among teenagers in [Session 3, Activity 3](#) also links to these ideas of a growth mindset.

The claimed difference in the overall 'control over their learning' is stark between those with a pre-determined (fixed) mindset and those with a free-choice (growth) mindset.

3 Where do beliefs about ability come from?

Many beliefs about sport and coaching (including ability) are **implicit**. They are taken for granted and not directly expressed. Therefore, these beliefs are very difficult to change because you are either unaware that you hold them, or they are so obvious to you that they don't warrant your attention.

Part of the process of sport and coaching education, such as this course and others, is to help make these beliefs **explicit** and, therefore, open to reflection, criticism and change.

Dweck suggests beliefs are partly fostered by the kind of praise and feedback you get from others such as teachers, parents and coaches. For example, think about the influential position of coach and parents in the ice skating video, which you watched as part of [Activity 2 in Session 2](#) ('The making of an ice princess').

Research suggests that being praised for ability (e.g. 'you're really talented' or 'you're a natural'), despite the initial thrill of a compliment, soon gives way to reduced motivation and overall performance (Mueller and Dweck, 1998).

It is preferable to encourage athletes by using expressions such as 'you worked really hard at that', which encourage the development of a growth mindset, as long as praise is not so frequent it loses its impact.

Figure 2 is a summary of sentences that young people can be encouraged to use as a starting point to move them towards a growth mindset.



Figure 2 Sentences that you can use to encourage young people to use to support a growth mindset

In fact, if you search online for 'mindset sport coaching', you will find many resources that reinforce the above points. Figure 3 comes from another researcher in the field of educational research, Angela Duckworth, and illustrates a similar focus on effort and persistence.



Figure 3 The Iceberg Illusion

4 Making it early in sport

In Session 3 you saw a vivid example of the hunger, drive and mindset needed to work towards mastery of rowing. Often in sport, a rising teenager (15–18 years old) bursts onto the adult national or international scene: what can happen to your hunger and mindset beliefs if you ‘make it’ early in sport (i.e. aged under 18)?

Author Rasmus Ankersen explains what his and others’s research has shown.

My definition of a winner is basically ‘a loser who has evaluated themselves’. This relates very well to a study that looked at the golden generation of Swedish tennis players. Back in the 80s and 90s Sweden had 5 of the top 10 best (male) tennis players in the world (e.g. Bjorn Borg et al) and the research showed that almost every one of them were not in the top 5 in the country as youngsters.

It’s interesting because those who start out with a big advantage or talent as youngsters don’t make it; it can be a disadvantage to be too good too early because you kind of feel entitled. Whereas a lot of these young Swedish tennis players had to struggle, they had to think about ‘how can I improve?’ and ‘why is this important to me?’ and ‘am I willing to do what it takes?’ So they all had an evaluation mentality and that is what made them winners.

(Ankersen, 2016)

Consider the following statements.

- Most children who are very successful in sport in childhood do not go on to later sporting success.
- Most people who are very successful as adults did not achieve amazing things in childhood.

You may be able to think of exceptions to these statements. However, they are in the minority. One thing is certain though, the appropriate motivation to continue learning is vital.

5 Sports psychologists explain their work

You have explored learning, feedback and those who experience failure, but what about something you so often hear in commentary and observations about those competing in sport: what are the qualities of 'resilient' or 'mentally tough' sportspeople?

In the next two activities, you hear from two leading sports psychologists who articulate what these terms, or their own versions of them, mean.

Activity 2 What is this thing called mental toughness?

 Allow about 20 minutes

This activity (which takes its name from Jones' 2002 article on mental toughness) introduces you to sports psychologist Peter Clough, who explains why 'mental toughness' is important for school children to master for their general development. Listen to this interview between a BBC interviewer and Peter Clough, and respond to the two questions below.

Audio content is not available in this format.



Peter Clough on toughness

1. What are the characteristics of Peter Clough's version of mental toughness?
2. What steps does he describe for enhancing mental toughness?

Discussion

1. Peter Clough talks about people coping in pressurised environments, describing people as
 - not being fazed by challenges
 - having control of the things they can control
 - controlling levels of confidence/commitment
 - learning from mistakes

He describes how high potential or ability cannot be realised when mental toughness is lacking.

2. He explains the importance of having clear and realistic goals and setting expectations based on a person's potential. He also outlines the importance of regulating emotion i.e. not letting feelings distract from what you are doing. In addition, the ability to deal with heightened emotions from anxiety and stress is mentioned. In each case, it is not entirely clear how these ideas are put into practice to enhance mental toughness, but some guidance is provided about goal setting and exposing people to challenges.

Next, you will hear from another sports psychologist, Dave Collins, who talks about the ideas that come from his research: he calls them the Psychological Characteristics for Developing Excellence (PCDE)

Activity 3 Negotiating challenges on the rocky road

 Allow about 20 minutes

Listen to the following interview with Dave Collins, one of the key authors of the PCDE research.

1. Dave Collins talks about psychological characteristics. What characteristic of sporting development does he focus on?
2. What is the connection to snow ploughing and his reference to super champs (champions) and champs in the second half of the clip?

Audio content is not available in this format.



Dave Collins on PCDE research

Discussion

1. He focuses on the degree of challenge that a person faces in their training environment and their response to it – in fact he mentions ‘challenge’ eight times and also refers to this development journey as ‘the rocky road to success’ (part of the title of one of his team’s research papers).
2. He makes reference to snow ploughing as a removal or obstacles and challenge in peoples development paths often being counterproductive. Dave Collins goes on to describe his most recent work comparing super champs and champs and how they cope with adversity; more importantly learning from challenge to enhance their skills and therefore take this into the next challenge. He suggests in his final comment that this is the biggest distinguishing characteristic between super champs and champs. It is not stated in the interview clip but a super champ is one who has 50+ national appearances in team sport or 5 or more world/Olympic medals.

Next, you will go on to explore psychological characteristics in more detail beyond responding to challenges.

6 Psychological characteristics explained

There is debate among the sports psychology community about the concept of mental toughness and the ability for it to be measured and developed. There is agreement, though, that sportspeople need to possess key psychobehavioural characteristics in order to progress (e.g. Abbot et al., 2002). One way to investigate such characteristics is by interviewing top athletes, and there are many researchers who have done this.

You will focus on MacNamara et al.'s (2010) work with Dave Collins, who you have just heard from in Activity 4. Their interviews are particularly useful since they cover research from sport, as well as musical performance.

Activity 4 Developing young athletes

 Allow about 25 minutes

Read the article [Developing excellence in young athletes](#), which provides a fascinating overview of the nine Psychological Characteristics for Developing Excellence (PCDE). Consider which of the nine characteristics provide you with **new** insights not yet fully explained on the course and which overlap and connect in some way with what you have already read about.

Discussion

Of the nine characteristics identified in the article, two may be familiar to you from what you have already read. The first of these was the item about **commitment**, while the second was about **quality practice**, which McKeever discussed in particular. In Activity 3, Clough briefly mentioned **resilience and self-regulation** and touched upon **focus control** when mentioning controllable aspects of performance.

Some of the new insights were probably things you have heard of but might not have read about before. For example, **imagery** (picturing successful future performances), particularly in pre-performance routines, is a very important skill. When **realistic performance evaluation and attribution** is described, does it make you think about people who attribute something to misfortune or anything other than themselves? Also, you have heard of **goal setting** before, but perhaps not in such detail.

The importance of **creating and using support networks** was last mentioned in the very first session of the course. However, support networks are not often recognised in sport: asking for help is a sign of strength and can play a key role in times of adversity.

You will be investigating some of these in greater detail in Session 6, which specifically focuses on some of the psychological skills used in sport and in life generally.

7 This session's quiz

Check what you've learned this session by taking the end-of-session quiz.

[Session 5 practice quiz](#)

Open the quiz in a new window or tab then come back here when you've finished.

8 Summary

The main learning points from this session are:

- The main features of fixed or growth mindsets stem from people's beliefs about ability and incorporate attitudes and behaviours towards challenges, obstacles, effort, criticism and the success of others.
- Mindset beliefs influence the overall control people feel they have over their learning and when striving for continuous improvement. For a player with a growth mindset, failure and mistakes are viewed as feedback opportunities.
- The behaviour and communication of coaches, teachers and parents influence beliefs about ability and hence a growth mindset.
- There are similarities between the ideas of mental toughness and the psychological characteristics of developing excellence (PCDE). The nine items used in the description of PCDE encompass a breadth of skills that psychologists often develop for performance in music, sport and education.

In the next session, you will discover how psychological skills and strategies are used to help make sense of fear, anxiety and emotion in sport. It is a fascinating topic.

You can now go to [Session 6](#).

Session 6: Psychological skills for life and sport

Introduction

In this session, you will take a look at a few of the more common psychological skills used both in life and in sporting competition, which can be used to respond to fear, anxiety and emotion. In your work, family or sporting life, you are likely to face situations in which you need to perform under pressure, such as giving a speech or being assessed for something (e.g. a driving test). You will look at case study videos and examples, which will give inside knowledge of how people such as Alex Danson use sports psychology in action.

The session starts with Michael Johnson and Chris Hoy discussing mental preparation for high-pressure situations, before moving on to how athletes and psychologists make sense of emotions and ways in which they can be controlled. Some of the specific techniques that athletes use before and during competition are then explored, including pre-competition routines, imagery and self-talk. You will finish by hearing how others face an intense situation, such as taking a penalty, and then play an online penalty shoot-out game.

By the end of this session, you should be able to:

- understand how psychological skills complement physical skills in sport and that both can be developed
- identify ways of making sense of fear and anxiety and also controlling the emotions created from these
- describe, in outline, three psychological terms: imagery, pre-performance routine and self-talk.

1 Chris Hoy's story

Chris Hoy's diverse childhood sporting background supports what was written in previous sessions about not 'making it' early. In Box 1 you will look at his route to cycling, before watching a video about his use of **psychological skills** at a key point in his career.

Box 1 Chris Hoy's route to cycling

Chris Hoy was one of Great Britain's most successful track cyclists, but he had an indirect path into cycling. In adolescence, he participated in rugby, athletics and rowing. He was proficient at them all, especially rowing, which he loved, but found that he was most physically suited to cycling. After international BMX racing from

age 7 to 14, he transferred his skills to mountain biking, then road racing. Eventually, when he was 17, he found track cycling and he was smitten with the experience.

His father emphasised the benefit of Chris not being a child champion:

He [Chris] was never up there but he just kept plugging away. You've seen other kids who were winning all the time and when they get beaten they don't like it so they stop what they're doing. As long as they're enjoying it and they're doing pretty well, there is not a lot between first and second.

(Hoy, 2013)

Activity 1 Chris Hoy's experiences of using psychological skills

 Allow about 15 minutes

Watch the following video, in which Chris Hoy catches up with Michael Johnson. Which of the psychological skills does he describe as the most useful to him? You may find the PCDE list from the previous session useful.

Video content is not available in this format.



Chris Hoy's experiences of using sport psychology

Discussion

Chris Hoy discusses his use of sports psychology and how seeking psychological support can allow athletes to be as prepared as possible when going for gold. He talks about his visualisation technique, which psychologists would call **imagery**. He used this in his preparation and pre-performance routine for the 2004 Olympic final. He discusses focusing on the process of performance and what he could control, so it partly relates to the **focus and distraction control** part of the PCDE. Before using such techniques, he describes the anxiety he felt before crucial competition and, in particular, a time when he panicked and finished poorly.

Chris Hoy's story of excelling under intense pressure should help you to identify in more detail what performing under pressure entails.

2 The art of performing under pressure

There are times in our lives when we all have to face performing under pressure, for example, an exam, a presentation, an interview or an intimidating social event. Dave Alred (elite performance coach to Rugby World Cup hero Jonny Wilkinson, as well as top golfers) has identified a range of strategies that he uses in his coaching. In addition to refining people's technique, Dave Alred works with:

- posture and body language
- imagery
- designing practices with pressure (covered in Session 7)
- trigger phrases.



Figure 1 Dave Alred

You will cover trigger phrases as part of self-talk later in this session, but the purpose of introducing you to Dave Alred now is to allow you to read an article about him on OpenLearn: [The art of performing under pressure](#).

In the next section, you will consider some of the things he talks about in a little more detail: fear, anxiety, emotions, routines and self-talk.

3 Fear and anxiety

The fear and anxiety experienced by players about to take crucial shots is a natural human response to a demanding situation. In this activity, Michael Johnson explores a sport in which there is a huge mental challenge, largely because there is a very real threat to life and limb: downhill ski racing.

Activity 2 A ski racer crashes – primitive fear

 Allow about 10 minutes

In the following video, you will see Michael Johnson hearing about fear and anxiety in ski racing. Please avoid watching the whole film. Your main task is to summarise how neuroscientist Ben Seymour describes fear and anxiety.

Go to the video [Michael Johnson downhill skier – BBC Inside Sport special](#) and start watching at 12:35 for one minute only until Ben Seymour finishes. If you want to watch ski racer Scott McCartney's stomach-churning crash including the reactions of those watching go back to 08:06 in the video, but be warned that you may find it uncomfortable to watch.

This puts Ben Seymour's words into a graphic context and it is his academic explanation of fear and anxiety that should be your main focus.

.....

Discussion

Ben Seymour outlines panic and fear as being a battle between the primitive part of the brain from our evolutionary past and the part of the brain trying to gain control over our actions, trying to get us to make rational decisions. He describes sports people's attempts to suppress automatic primitive fear responses. But fear and panic don't just apply to sport: we all face it in different ways through the challenges of daily life.

Next, you will discover how people manage their emotions of fear and anxiety.

4 Managing your emotions and anxiety

Psychologists working in all fields of human endeavour are seeking ways of helping people deal with fear and anxiety. Fear is not just about primitive threats to life; it is also about the broader range of negative emotions and anxieties that can sabotage even simple tasks. The causes of this fear could be a phobia about spiders, threats to one's self-esteem (e.g. asking for a date) or the stressful situations athletes face.

Over the years, psychologists have developed ways of helping people to distract themselves from focusing too much on negative emotions and thoughts. One example is psychiatrist Steve Peters, who talks of a primitive chimp-like voice representing a part of the brain. This echoes with our primitive evolutionary past, which Ben Seymour spoke of in the ski racing film in Activity 2. This reference to a chimp is a teaching tool that helps people understand and thus control their emotions better. In the next activity, you will hear directly from multiple snooker world champion Ronnie O'Sullivan on how he learnt to control his negative emotions with the help of Steve Peters. This falls under the 'resilience and self-regulation' part of PCDEs.

Activity 3 Controlling your emotions in sport

 Allow about 20 minutes

Watch the video below. How did Ronnie O'Sullivan develop his understanding that enabled him to help control his emotions?

Video content is not available in this format.



Ronnie O'Sullivan on controlling his emotions

Discussion

Ronnie learned to understand himself better by looking at what stimulates his emotions. In particular, he learnt that the conflict in his mind between the logical self and more emotional self could be controlled. By embracing Steve Peters' 'chimp' model, he was able to distance himself from the emotional part of his brain by talking about it in the third person (i.e. 'sometimes I can fire him up and sometimes I can take him down' (O'Sullivan, 2013)). Thinking about emotion as a detached third person in itself is likely to make it easier to regulate and control.

Ronnie O'Sullivan (2013) has also reported a five-point 'anchor' that helped control his emotions, which is summarised below:

1. Do my best; that's all I can do.
2. I want to be here competing.
3. I'm an adult, not a chimp. I can deal with anything.
4. It's impossible to play well all the time.
5. What would I say to my children if they said their game was not right?

Again, you can see these statements reinforce his logical self, rather than any emotional impulses, and help displace negative thoughts.

5 Seeing challenge as an opportunity

As you have heard from both Chris Hoy and Ronnie O'Sullivan, performing under pressure is partly about how challenges are framed. While 'butterflies in the stomach' from anxiety can be unsettling, the only way to get them to 'fly in formation' (Hanton and Jones, 1999) is to try out new strategies of dealing with situations rather than avoiding them.

Skilful coaches and parents therefore talk through how young people might approach a pressurised event and help give them the skills (e.g. imagery, self-talk, appropriate goals – see PCDEs in [Session 5, Activity 4](#)) to cope with the demands they face. You may recall that there was a scenario related to this in the Medal Quest game – you will get a chance to try it again at the end of the next session with the help of this new knowledge.?

6 Emphasising the familiar: pre-competition routines

There is something very safe and familiar about a routine (or even a 'ritualistic pattern') that you adopt when you prepare for work, to drive your car or to go out with others. Sportspeople emphasise these principles of familiarity and control, so that they can prepare to face the most intense situations with a consistent approach. It partly distracts them from feeling anxiety. A routine becomes a sort of safe haven. This is the unseen side of sport.

Muhammed Ali once said, 'the fight is won or lost far away from witnesses – behind the lines, in the gym, and out there on the road, long before I dance under those lights', and although it is unclear to what he was referring, these words are appropriate for pre-competition routines.

Activity 4 Behind the lines

 Allow about 15 minutes

Watch part of the video [BBC Sport – London 2012 psychology](#), in which Jonathan Edwards and Matthew Syed briefly summarise pre-performance routines. This is a deliberately short clip.

What three elements do they outline that people might draw on to help overcome self-doubt and/or nerves? How does this compare to your own preparation moments before a key high pressure moment in sport or work?

Discussion

In this clip, Jonathan Edwards emphasises the individualised nature of pre-performance routines and ultimately you have to find your own way. It is not stated but he implies that you often do this by trial and error. Then Matthew Syed goes on to suggest that routines often follow a ritual pattern in which prayer, superstitions and visualisation are sometimes used; he describes the process as being about helping to provide reassurance and control. You will find that Figure 2 gives more specific advice along with subsequent sections on 'self-talk' and Alex Danson's experiences.

Figure 2 gives a useful summary of some of the latest thinking and research in this topic.

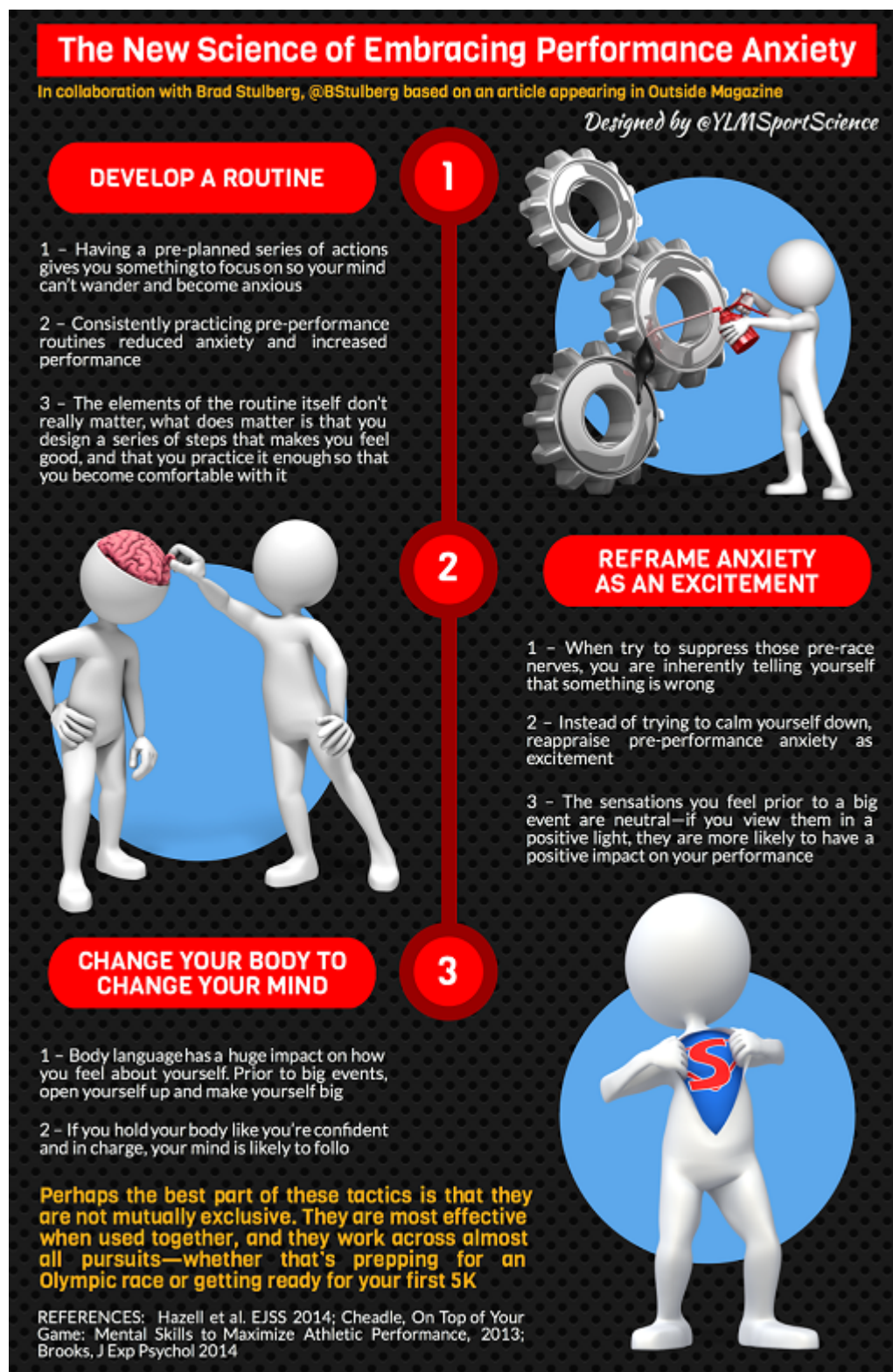


Figure 2 The new science of embracing performance anxiety.

The routine athletes construct before they compete is therefore part of their armoury, but they can also use another powerful tool to help them as part of their routine: what they say to themselves.

7 Self-talk before important sporting moments

When you are learning to drive, you are often taught a bit of self-talk to remind you what to focus on next, for example, 'mirror-signal-manoeuve'. Earlier Dave Alred described these as trigger phrases. What do you say to yourself when you face important moments in sport, such as a penalty, tennis serve or golf shot?

Here is more detail in how self-talk is used from a large online study. Michael Johnson used four different types of self-talk in a [BBC Lab UK online experiment](#) in which 44,700 people took part (Lane et al., 2016). You are not required to work through BBC Lab UK resource – it is for information only.

In the online study before users completed an online concentration task, Johnson showed participants one of four types of self-talk, each with a different focus. Here are the four phrases with their associated focus:

- '*I can react quicker this time*' – the **process** of completing the task
- '*I can beat my best score*' – motivation towards a **positive outcome** of the task
- '*I will stay calm*' – the **control of excitement/anxiety** during the task
- '*I will focus completely on each number I need to find*' – **instructional** guidance for the task.

In this experiment, a focus on process and outcome was found to be the most effective use of self-talk. If you want to read the full academic study, see [Brief Online Training Enhances Competitive Performance: Findings of the BBC Lab UK Psychological Skills Intervention Study](#).

Now let's consider how this applies to penalty taking.

8 Self-talk before penalty taking

Read about Alex Danson's experiences before taking a penalty. How can her use of self-talk be categorised into a process, a motivational outcome, a control of excitement/anxiety or an instructional focus?

Alex says ...

During the semi-final of the Olympic Games we won a penalty stroke, almost immediately I knew it was my job to step up to the spot. The last time I took a penalty stroke was at the European Nations Cup, and I had missed. I had consciously changed a few behaviours after this last experience. Firstly, in this instance, I outwardly celebrated winning the stroke. I then picked up the ball and very slowly walked to the spot where I put the ball down. I stood up very tall and looked at the goal and visualised exactly where I would put the shot. I then paused, took a deep breath and remember thinking, 'this is going in'. I didn't let any negative thought pass through my mind. I had done all the practice, I had a physical and mental routine and although I was in an Olympic semi-final, it felt like I was just taking another shot back at our training base at Bisham Abbey. In this example, I scored and we went through to the Olympic Final.

In contrast, at the end of the Olympic Final, I had a penalty shuffle, a different skill to a stroke, but requiring the same mental skills. I employed all the same techniques and this time the keeper saved it, but this was an outcome I had already accepted was a possibility before the game had even started. This was important as my mind and body had to be ready if I was needed to step up and take another, in case it got around to sudden death. For me, the acceptance of either outcome before the game meant on both occasions I took the stroke and shuffle without nerves and full of confidence.

Notice how Alex had consciously adjusted her behaviours from the European Nations Cup. Her routine was deliberately orientated towards a positive outcome of the task (i.e. saying 'this is going in') and her body language (i.e. standing tall), visualisation (i.e. the placement of the ball in the goal) a set routine and acceptance of either score or saved outcome all helped towards **controlling excitement/anxiety**.

9 This session's quiz

Check what you've learned this session by taking the end-of-session quiz.

[Session 6 practice quiz](#)

Open the quiz in a new window or tab then come back here when you've finished.

10 Summary

The main learning points from this session are:

- Psychological skills in sport can be refined by practising them as part of the development path in sport. Coaching towards elite levels in sport might therefore be considered as a balance between challenge, support and psychological skills.
- Fear and anxiety are a natural reaction to demanding situations in which the primitive parts of the brain respond to threat. The rational part of the brain can be used to interpret and control heightened emotions.
- The use of imagery as a psychological skill helps athletes reinforce their control, block out distractions and focus on their own performance.
- Controlling emotions can be developed by viewing challenges as active choices and not obstacles, and taking responsibility for thoughts, feelings and behaviours.
- Self-talk is used to help focus thoughts towards relevant aspects of performance and can have a process, motivational, emotional control or instructional focus.
- Pre-performance routines build familiarity and control into pressurised situations and might draw on habits, imagery and self-talk to help achieve this.

In the next session, you will be seeing how the science of learning and teaching can have an important influence on how coaches design effective training sessions. It is connected to coaching and athlete creativity and you may be surprised at how the evidence points towards a fresh look at coaching.

You can now go to [Session 7](#).

Session 7: A fresh look at coaching

Introduction

In this session, you will examine how coaching styles and practice sessions might be changing. The coach is the person who designs practice sessions, and they play a key role in creating imaginative situations in which their athletes can learn and refine technical, psychological and tactical skills.

You will start by hearing from leading coaches describing their work at both a club level and an international level. Both scenarios question the use of repetitive drills and you will find out why. You continue by exploring practice principles developed by Bailey (2014a) who, with some humour, called them 'coaching commandments'.

Watch the following video featuring Alex Danson.

Video content is not available in this format.



Introduction to Session 7

By the end of this session, you should be able to:

- describe some outline features of 'how' coaches might run sessions that help people learn
- recognise the role of creativity in providing quality practices
- appreciate how principles based on the science of learning and teaching have an important place in influencing coaching, teaching and instruction in sport.

1 How do coaches design practice sessions?

Your exploration of coaching sessions starts by considering a typical situation in clubs and gyms. In Box 1, an experienced Irish coach (Adrian O' Sullivan) describes two friends asking for help with their next coaching session. He identifies a significant contrast between them.

Box 1 Training session advice

I get two texts from friends of mine. Both have started taking training sessions with teams in their respective clubs. The first one (A) is along the lines of 'I've just started

doing a bit of coaching, have you any drills for me?'. The other guy (B) comes to me and says 'The under fourteens I'm coaching are weak under the aerial ball; how can I work on it in a training session?'

Both questions might appear to be very similar. But immediately without ever seeing them on the training ground I know that one of these guys is already on a different level to the other. However, I also think that they are both limiting their horizons by seeking the easy option and asking someone for a drill.

Friend A has fallen into the trap that befalls so many trainers out there. He has sixty minutes to **fill** [emphasis added] on a Thursday evening and he wants three drills to fill the time before the kids play a match. Preferably drills that are easy to execute but look complex enough that the ... parents looking on and the chairman of the club look at him and say 'Jeez fair play to him he's ... good'.

He has no goal in mind for the session. No learning outcome that he wants the players to achieve and hasn't identified any weaknesses to work on.

Friend B is thinking like a teacher [coach]. He has identified a weakness in his team and he is looking for a way to work on improving this in his session.

(O'Sullivan, 2015)

Activity 1 Training session advice

 Allow about 20 minutes

Read the contents of Box 1 about the contrast between a 'trainer' and a 'coach' from the perspective of Adrian O'Sullivan. From what sources do most coaches learn how to run their sessions?

.....

Discussion

An approach like Friend A (i.e. based mainly on using drills) is most commonly influenced by previous playing experiences of how they were coached: O'Sullivan calls him a trainer. They learn from watching what other coaches do. These are powerful shaping forces that are hard to change (Potrac et. al., 2007); training courses often struggle to change this perspective as beliefs about practice are handed down. In contrast, it is claimed Friend B (teacher/coach) is thinking about the learning goals of a session and sees participants as learners.

There is a danger that many coaches continue using the practices that they are most comfortable with, without consciously designing learning into sessions and then reflecting on it.

2 Richard Bailey's 'coaching commandments'

Richard Bailey is an academic focusing on learning and education in sport and has developed five **coaching commandments**, which he describes as the appliance of science in teaching and learning. By science he means:

thinking coaching through, and using a genuine critical attitude about what we do, there has to be evidence, there has to be science and reasons for doing things; coaching is dominated by tradition, sometimes this is harmless but sometimes it does harm and holds athletes and coaches back.

(Bailey, 2015)

Activity 2 Richard Bailey's first two coaching commandments

 Allow about 10 minutes

Watch the following video in which Richard Bailey describes his five coaching commandments.

Video content is not available in this format.



[Richard Bailey's five coaching commandments](#)

Identify the main point of the **first two** of his commandments:

1. You learn to play the game by playing the game.
2. It's quality, not quantity, of practice that matters most.

Discussion

The main point in his first commandment is that practices are most effective if designed to resemble the competitive environment as closely as possible. This makes it more likely that the skills and understanding will be developed to properly prepare athletes for their activity. In his second commandment, he focuses on attempts to stimulate full mind and body concentration in practices, rather than concentrating on 'mindless repetitive drills'. You will explore examples of these principles in the sections that follow.

2.1 You learn to play by playing the game

Richard Bailey's (2014a) first coaching commandment is not universally used, despite seeming obvious. In the next activity, you will hear Olympic coaching advisor Simon Timson (at the time from UK Sport) talking with Matthew Syed (journalist and former elite athlete) about the absence of stimulating and stretching sessions in some coaching they have watched.

Activity 3 Stimulating and stretching sessions

 Allow about 10 minutes

Listen to the discussion and consider the four recommendations about practice sessions that emerge.

Audio content is not available in this format.



Simon Timson and Matthew Syed

Discussion

A summary of the recommendations made were for coaches to make use of:

- highly contextual 'decision-rich environments'
- competitive practices
- feedback including allowing a trial and error approach
- coaches and athletes reviewing their training afterwards.

This throws more light on Bailey's commandment 'you learn to play by playing the game'.

A highly contextual environment refers to skills being developed in the context of the competitive situation, rather than in isolation, for example, in repetitive drills. Would you teach someone to play golf solely on a golf driving range or teach netball unopposed? These ideas are similar to a model called [Teaching Games for Understanding](#) (Kirk and MacPhail, 2002).

One of the aims of this section is to draw attention to coaching creativity, but you may wonder 'what is creative about game-like practice sessions?' Alex Danson's hockey coach explains his innovation in the next section.

2.2 Coaching and creativity

Danny Kerry is the Head Coach of the England and Great Britain's Women's Hockey team, and is responsible for coaching them at the Olympics. He describes his design of practices moving beyond drills and repetition.

Box 2 Danny Kerry talks about his session design

Danny is an advocate of ... challenging his athletes to find solutions to problems themselves rather than [them] hang on his every word.

'I'm a massive believer in continually creating the problems for the athletes to self-organise solutions to,' he says.

'I'm constantly thinking about session design with the other coaches and with some of the other practitioners ... **thinking creatively about how we can create**

problems [emphasis added] in the environment and discuss what a really great outcome might be. Then tell the athletes to work towards achieving that outcome.'

There tends to be more of a reluctance among the older players to strike out on their own, preferring an approach of repetitive drilling.

'They've grown up in an environment where they have had a lot of this type of coaching and perceive it as good coaching. I try to challenge back and tell them that the hockey environment is changing half second by half second, and you have to [continually] decide which method or skill to use ...'

(Richardson, 2015)

Activity 4 Danny Kerry's creative session design

 Allow about 10 minutes

Read the contents of Box 2 and consider why athletes and parents in your sport or gym environment might prefer repetitive drills to this more creative approach.

Discussion

Danny Kerry is an advocate of decision-rich practices in which athletes solve problems. The 'norm' for older athletes, and some parents, was for the coach to be the centre of all activities and their knowledge was seen as one of the most important facets of good coaching. The problem is, increasing amounts of research shows that you don't retain skills as effectively if they are just practised using repetition (Patterson and Lee, 2013; Schmidt and Lee, 2011).

Alex Danson backs up Danny Kerry's approach to session design.

Alex says ...

As a young athlete, I spent many hours training and practising on my own. On one level, this was an excellent use of my time and meant that technically I became very good. However, as I have progressed in my career I have realised the art of 'skill' is to be able to apply it in the right situation, which is forever changing in hockey. In our world, I could be the most technically gifted player at reverse stick shooting, but if I am unable to choose the appropriate time to use this skill in a game, then my technical excellence is cancelled out. We spend ninety per cent of our training week in training drills that ensure we have to make decisions. We do not use cones or play many small-sided games, but use game-related drills to make sure that we learn to make the correct decisions under the pressure of a changing game environment.

Perhaps athletes and parents need to appreciate why a shift in coaching style to something similar to Alex's experience helps people to learn. The second of Richard Bailey's coaching commandments explores this shift in style further.

3 Quality not quantity of practice

When you listened to Teri McKeever in [Activity 4 in Session 4](#), she was largely agreeing with this commandment when she said:

I think there's a place for volume but there's also a place for quality. And I don't always mean quality is faster, I think quality is about quality technique, quality is about purposefulness, intention, the relationship to your racing event.

(*The Documentary*, 2014)

If you also consider team sport, Eddie Jones (England rugby union coach) emphasises that sessions are sharp with no stopping to rectify mistakes.

The saying **practice makes perfect is untrue** [emphasis added] when it comes to preparing for a match. A game of rugby is chaotic, not structured. You have to be able to react, make decisions and work out where you went wrong. The old way of training was nice and slow, everything done methodically, but that is finished now because rugby is not like that any more.

(Rees, 2016)

This principle suggests, at higher levels of sport, an increasing intensity and focus to practice that encourages athletes to solve problems in varied situations. This requires detailed planning from coaches. The old methodical approach, often using drills, was easier to control and manage, which is partly why coaches are so comfortable using it.

4 Richard Bailey's other commandments – how to coach

You now revisit the coaching commandments video to focus on Richard Bailey's final three commandments.

Activity 5 Richard Bailey's final three coaching commandments

 Allow about 10 minutes

You will now go back to think about Richard Bailey's five coaching commandments. You may like to watch the video again.

Video content is not available in this format.



Richard Bailey's five coaching commandments

Identify the main point of each of the **final three** coaching commandments:

- Praise and criticism should be used wisely.
- The way you coach is as important as what you coach.
- It is impossible to tell the future.

Discussion

For his third commandment, Richard uses the analogy of praise and criticism being a bit like salt on a meal: used sparingly it can enhance the experience, but too much can ruin it. He suggests that there is a tendency for those coaching young people to use praise too much, which can damage self-esteem by harming the coach–athlete relationship.

In his fourth commandment, he is talking about encouraging creative, innovative athletes who are often unpredictable in their performances. For example, Lionel Messi was deemed too small to succeed in football but compensated by becoming an exceptional dribbler of the ball; or consider Michael Johnson who used an unorthodox upright running style. To encourage alternative approaches, he suggests coaches need to coach imaginatively and concentrate on the outcome of any techniques, not how it looks compared to the coaching manual. Fewer coaching robots: more flair, finesse and thinking outside the box.

Finally, in his fifth commandment, Richard considers the impossibility of predicting, especially in primary-aged school children, who might have sporting talent. His plea is for coaches and sporting organisations to keep as many young people engaged with positive sporting environments for as long as possible, out of which the best players will emerge. By keeping the selection open for more people, the net is cast wider, which benefits all.

All of these coaching commandments are supported by research. If you want to find out more about his final three coaching commandments, you can read the articles below. This is optional and not a requirement.

- Coaches should use praise and criticism wisely:
[The problem with praise: praise is not always a good thing \(Bailey, 2014b\)](#)
- The way you coach is as important as what you coach:
[Let the creative sparks fly: the 'C' system \(Richardson, 2016\)](#)
- It is impossible to tell the future:
[Survival of the fittest or survival of talent \(O'Sullivan, 2015\)](#)

5 Final thoughts: a fresh approach?

Throughout this course, coaching that emphasises athletes making decisions and different styles of quality practices has been discussed.

Box 3 is a snapshot of how the English Football Association's (FA) youth coaching badge scheme is adjusting its approach. This extract is taken from the start of a *Guardian* newspaper article entitled

[FA's youth coaching game-changer means more ball-work and less shouting.](#)

Box 3 FA's youth coaching game-changer means more ball-work and less shouting

A fresh approach to the education of coaches moves away from the command-style model to a method that is more about whispering than hairdryer treatment.

'Hey Thomas. Love your bravery to try that first-time pass. Keep it up. Your next challenge is to make sure you leave the ball playable for Adam or Conor ...'

(Fahey, 2016)

You may think from 'hairdryer treatment' to 'whispering' is rather far-fetched. However, if you look carefully at the quote at the start of the article about Thomas's 'bravery' and 'your next challenge', you can begin to see feedback on effort and challenge that closely resembles Dweck's (2012) ideas on a growth mindset. Is coaching changing? Your own experience of sports coaching as a parent or participant will be a good judge of this.

Contribute to the dialogue on the

[Succeed at OU sport, fitness and coaching Facebook page.](#)

6 This session's quiz

Check what you've learned this session by taking the end-of-session quiz.

[Session 7 practice quiz](#)

Open the quiz in a new window or tab then come back here when you've finished.

7 Summary

The main learning points from this session are:

- Some of the features of coaching sessions that help people learn include:
 - coaches have a clear learning goal
 - providing variety
 - allowing a trial and error approach
 - reviewing the session afterwards.
- Creativity in designing training sessions helps provide quality practices by encouraging participants to:
 - react to game-like situations
 - solve problems
 - make decisions, even if some of their solutions are unorthodox.
- Richard Bailey's five commandments are principles based on the science of learning and teaching and can help guide coaching.

In the next session, you will explore the future of coaching in light of technological developments. By focusing on two examples of technology, you will develop your ability to question and critique what is often reported about such developments in the media.

You can now go to [Session 8](#).

Session 8: The future of coaching: technological influences

Introduction

This final session explores how sport, coaching and exercise may change in the next 20 years. There has already been a discernible shift in coaching to a more evidence-based approach; now you will consider technological developments that might influence a coach's work. You will do this with the help of Michael Johnson, who has travelled to various organisations looking at what the future might hold.

This session starts with three short videos from Michael Johnson, each casting light on some significant likely changes in sport. The first video features interviews with a Red Bull sport scientist, the second focuses on the recovery from exercise and the third on wearable technologies.

Critically examining online and media sources will help you to make sense of your sporting interests and the world around you. For this reason, you will be asked to respond to an important question: how much can we trust what journalists say?

By the end of this session, you should be able to:

- list two type of broad claims made about technological innovation in sport and exercise
- outline key themes from technological developments that may influence coaching and instruction in the future
- start understanding how to evaluate evidence and journalist's claims in sport, coaching and exercise.

1 Where next in coaching and exercise?

Gazing into the future can be fascinating and can be used to help identify some of the main themes that are starting to influence coaching and instructional practice today. Throughout this session, you will consider how much of what you see or read is verifiable with evidence.

Activity 1 What sporting future?

 Allow about 15 minutes

Watch the following video, in which Michael Johnson hears from sporting professionals on what they think the future of sport holds. Can you identify three to five overall themes that are shaping the future of sport? To give an example, one of the themes is clearly about **technological developments**.

Video content is not available in this format.



What sporting future: risks and rewards

Discussion

Contributors talked about the impact of the '**technological revolution**' on sport, which includes the development of prosthetic devices. The timescale of these technological advances was quoted as being since about 2010. Another speaker claimed that our understanding of **how the body works** and, in particular, nutrition and the muscular fuelling systems, will lead to future improvements in performance. Perhaps a less tangible leap forward was suggested to be in the increased knowledge of **cognition** (mental actions and processes), including human 'spirit' and creativity.

Further advances are likely, as a result of worldwide **access to sport being broadened**; it was claimed that groups of the world's population may be discovered that have a **genetic predisposition** to respond to training extremely well and therefore have sporting potential (termed 'trainability'). The caveat to these possible developments was that governing organisations in sport need to keep up with such progress in order to maintain fair, balanced competition. Also, notice how it is useful to frame most of these developments as 'claims' at this stage, until the evidence of their impacts become clear.

In summary we can say that technological innovation in sport and exercise will a) increase human performance and b) increase the ability to monitor the working of the body and/or mind.

If you want to understand more about a very real example of technological augmentation, you may want to read this article about a Paralympic long jumper, [Should 'Blade Jumper' Markus Rehm be allowed in the Olympics?](#)

2 Recovering from intense exercise

Recovery from exercise is a very good example of an area in which rapid gains in technology and understanding have been made since 2010.

Activity 2 Recovery: the new frontier?

 Allow about 15 minutes

Watch the following video , in which Michael Johnson hears from physiologists and trainers about developments in this field. What, if anything, surprised you in this video?

Video content is not available in this format.



Recovery: the next frontier in sporting progress?

Discussion

Did the potential link between recovery and genetic responses or gene 'switches' surprise you as an example of the detailed research in this field? Or perhaps the visual image of someone stepping out of a dry ice cryogenic chamber (-100°C and lower) made you realise how specialised the field is becoming?

The statement implying that the placebo effect might be important was perhaps surprising, 'if an athlete thinks something is working ... it is working'. The same contributor also stated that with such rapid advances, if they wait for things to be proven scientifically, then they can be behind the curve of meeting athletes' and coaches' needs.

The **how the body works** theme, including recovery, has benefited from equipment/ devices becoming more available; however, some of the equipment is costly (e.g. ice cryogenic chamber), so is not yet accessible to all.

3 Wearable technology

One device that is modestly priced, very portable and influencing many people is wearable technology. For example, you may have a better understanding of how your body responds by using a wearable device (e.g. measuring sleep patterns, steps taken, skin temperature, heart rate).

Activity 3 Johnson investigates new smart devices

 Allow about 15 minutes

Watch the video below which has two sections: first, Michael Johnson visits the developers of new smart clothing in the USA and second, he heard from David Brailsford (UK) about a possible future with real-time nutritional aids. How useful are these two innovations likely to be for coaches and sports people?

Video content is not available in this format.



Looking inside the engine: US and UK perspectives

Discussion

The prospect of people being able to monitor which muscles are being used and the timing of, for example, leg contractions, might make what was once lab technology far more accessible to coaches and athletes. It was interesting that this clothing device picked up an anomaly in Johnson's movement due to a previous injury.

In the second part of the video, David Brailsford (cycling coach/performance director) was palpably excited at the possibility of devices monitoring the fuelling state of athletes in real time. This could mean that deciding when and what to eat could become far more refined and could transform approaches to nutrition and training.

There is a lot of hype and excitement about developments and, while you can trust some sources when they speak about these advances, you have to treat many with caution. For example, numerous ambitious claims are made for technological advances on the internet and through social media, but the scientific credibility of some of these is highly questionable. It is worthwhile reflecting on the ways in which you might be able to evaluate the reliability of some of the claims made about 'sport science' advances. What clues are there that the claims are realistic and based on sound science? What clues are there that you are being presented with a scam?

4 How much can we trust what journalists say?

You certainly cannot believe everything you read and fact and fiction often become blurred in sporting practice. For example, the media and public perception of coaching is often a long way from the reality of what scientists and coaches actually do.

Next, you will be asked to choose one claim from *WIRED* magazine, who describe themselves as 'bringing you the people, the trends and the big ideas that will change our lives' (*WIRED*, 2016), and look at the veracity of their journalistic claims.

Activity 4 Read about two innovations you will investigate further

 Allow about 15 minutes

Read **part of** the following *WIRED* article [15 innovations pushing human performance to the limit](#). The purpose of this activity is to read about two of the innovations (innovation 7, 'The filter that spots trainability', and innovation 14, 'Tools designed to warm up the mind'). Identify which of the two claims you may already know something about from this course.

Discussion

These comments will help you make connections with earlier parts of the course.

- Innovation 7 – 'The filter that spots trainability'. You have already seen some similar ideas to this in [Activity 5 in Session 1](#), about canoeists preparing for Tokyo 2020. This has a focus on identifying talent and links to your previous exploration of the components that contribute to sporting success.
- Innovation 14 – 'Tools designed to warm up the mind'. The ideas in this may be entirely new to you and are experimental, as they claim to manipulate the brain in order to improve learning and possibly performance.

5 How to evaluate a claim or innovation

It is worth pausing for you to think how you will evaluate such claims or innovations. You will take three steps:

1. First, you will need to pin down exactly what is the claim that is being made? Often the words, language and, perhaps, use of a newsworthy story can often make it difficult to extract the central argument or, in this case, the claimed impact of an innovation.
2. Second, look for research evidence, preferably from a scientific journal or credible publication, or examples showing the support of other unbiased organisations. Remember the support of a commercial organisation might be more about money, rather than an endorsement of any claims being valid.
3. Finally, short articles such as those in WIRED will often present the information in a very short outline. Is there any key information missing that would help evaluate the claim further?

You will briefly consider these points for innovation 7 ('The filter that spots trainability') before spending more time on innovation 14 ('Tools designed to warm up the mind').

6 Examining 'The filter that spots trainability'

This section will help you check your early ideas in evaluating the way this innovation is described and any claims made.

Activity 5 Evaluating innovation 7

 Allow about 15 minutes

Read [The filter that spots trainability](#) again and identify:

- i. What is the claimed innovation?
 - ii. Does anything help support its credibility?
 - iii. Is there any key information missing that would help evaluate the innovation further?
-

Discussion

- i. The claimed 'filter' is a screening process that identifies adults who have a talent to thrive in a particular sport. It is claimed that measuring the 'right stuff' and 'commitment' is possible. Highly planned learning is required, including learning from mistakes. This statement may not be that surprising to you having done this course.
- ii. Research from the University of Bangor is cited to support credibility. If you look at the source of [Figure 2 in Session 1](#), you will see that Rees et al.'s (2016) research (Rees is from the University of Bangor) has informed your study experience already.
- iii. It is not made clear how they identify athletes nor how they measure commitment other than putting athletes through tough developmental challenges, such as winter canoeing tasks, and seeing how they react (see Activity 5 in Session 1)!

You may reach a conclusion that the claims made in this part of the *WIRED* article are partly supported by evidence, although the journalistic language is very sensational.

You have started to evaluate online material and ask questions about this claimed innovation but you will now explore innovation 14 in more detail.

7 Examining 'Tools to warm up the mind'

Since innovation is entirely new to you, we will evaluate the way this innovation is described and then look for further evidence with the help of Michael Johnson.

Activity 5 Evaluating innovation 14

 Allow about 15 minutes

Read [Tools to warm up the mind](#) again and identify:

- i. What is the claimed innovation?
- ii. Does anything help support its credibility?
- iii. Is there any key information missing that would help evaluate this innovation further?

Discussion

- i. The article talks about a programme (the meaning of this ambiguous word is not clear) that delivers 'pulses' to the mind before exercise. It is claimed that this 'upgrades' the brain's hardware (a strange, computer-like choice of words) and athletes can go faster and further. Hardware is completely misleading, since it refers to the grey fleshy bits of the brain. The 'software' of the brain would be its thoughts, emotions, etc..
- ii. The mention of the military and medical sectors is attempting to suggest it may have some credibility beyond sport. The bold claim of helping people walk again is perhaps purposefully used to attract attention, much like using the term 'upgrade' when talking about the brain.
- iii. It is not clear what the pulses consist of (e.g. sound, magnetism, heat, microwaves), nor what systems in the body are made more efficient, and therefore how it operates (muscular, cardiovascular, nervous systems). As a reader, one is left uncertain whether this development is about helping human learning (e.g. learning to walk), processing (e.g. thinking) or performance (e.g. walking faster)?

You have started to evaluate this, but you can now explore a little deeper.

7.1 Exploring further

Here you will spend a few more minutes looking further into innovation 14.

Activity 6 Michael Johnson visits Halo Neuroscience

 Allow about 15 minutes

In this video, Michael Johnson hears from Daniel Chao, the founder of Halo Neuroscience. How does the video expand your understanding of the claims made about this innovation? Can you detect any opinion that Michael has about this innovation?

Video content is not available in this format.



Michael Johnson meets Daniel Chao

Discussion

The film suggests that it is electrical pulses that are aimed at specific parts of the motor cortex that are responsible for movement in the targeted part of the body; in the case of the film it was the legs. The claim is that the device 'supercharges the pathways between the muscles and the brain' and this stimulates learning to be more efficient resulting in improved athlete output for the same level of effort. The participant on the treadmill, Ryan, describes the feeling of a 'slight tingling' sensation in the head.

Johnson does not give a great deal away about what he really thinks about the potential of this innovation, but it is noticeable that he does not have a trial of using the device. There perhaps remain unresolved questions about how it operates and precisely what mechanisms explain this heightened learning; there is also the question of the impact of these devices with sustained use.

If you visit the [Halo Neuroscience](#) website, the details of the electrical pulses are explained under [Frequently Asked Questions](#), as are questions about user safety.

One of the best independent summaries of the evidence and ethics of this innovation is provided by a short readable article [Brain stimulation in sport: is it fair?](#) Your conclusion from evaluating this innovation may, like Johnson, be slightly circumspect. However, this example does illustrate how you should be cautious in what you interpret from online sources, while also recognising that sport, coaching and exercise could look very different in the years ahead.

8 Thinking about where your sport and/or coaching is going

To finish your work for this week, you will now use social media to express your views.

Activity 7 Where is coaching and sport going next?



Allow about 15 minutes

Make a post to an appropriate online network (i.e. [the Succeed at OU sport, fitness and coaching Facebook page](#) or your own blog) about where your sport and/or coaching is going, based on what you have read. Articulating your thoughts is a good way of making them explicit and will help clarify your thinking.

.....

Discussion

By expressing your thoughts, it may well create dialogue with others. It will be fascinating to see how different viewpoints emerge and the influence of what you have read.

9 This session's quiz

Congratulations on almost reaching the end of the course.

Now it's time to complete the Session 8 badged quiz. It is similar to the quiz that you took at the end of Session 4, with 15 questions in total.

[Session 8 compulsory badge quiz](#)

Open the quiz in a new tab or window and come back here when you're finished.

10 Summary

The main learning points in this session are:

- Some of the claims made about technological innovation in sport and exercise are that developments will increase human performance and the ability to monitor the working of the body and/or mind.
- The key themes from technological developments that may influence coaching and instruction in the future are:
 - the reduced cost and availability of wearable digital devices
 - an increased understanding of body and mind
 - the access to sport being broadened
 - an increased understanding of genetics.
- Evaluating the language used in journalists' descriptions, along with any supporting evidence, is a useful first step in considering the credibility of claims made about sport, coaching and exercise.

11 Where next for developing your future?

In working through this course, you have hopefully learned new perspectives and noticed how studying online in this way can be fascinating. The unique advantage of viewing quality learning material, supported by rich videos, is that it is engaging, flexible and at your fingertips wherever you go.

Also, it means that you can learn and work/play close to your sporting environment. Learning so close to your sport means that you can easily make connections and applied links between theory and practice as you work through the intriguing material.

If you are new to The Open University and already enrolled or about to enrol on the Open University [*BSc \(Hons\) Sport, Fitness and Coaching*](#), this course represents great preparation for studying with us.

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You can now return to the [course page](#).

Tell us what you think

Now you have completed the course, we would again appreciate a few minutes of your time to tell us a bit about your experience of studying it and what you plan to do next. We will use this information to provide better online experiences for our learners and to share our findings with others. If you would like to help, please fill in this [optional survey](#).

You can now return to the [course page](#).

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Activity 3: Cahill, J. (2016) '10 keys to unlock your coaching potential', *Keeping kids in motion* Available at

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Week 3

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Week 4

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Activity 5: Schroth, H.A (2013) extract from: Coach McKeever: Unorthodox Leadership Lessons from the Pool in California Management Review 56, 1, 89-99, California Management Review, University of California

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