

CHAPTER 10: Development of elite performers in sport

Practice questions - text book pages 146 - 147

- 1) Which one of the following is a national governing body of sport?
- Street Games.
 - British Olympic Association.
 - Talent Identification programme.
 - British Athletics UK .

Answer: d.

- 2) Which one of the following is not an EIS Performance Pathway?
- Pathway Analytics.
 - Pathway Education.
 - Pathway Screening.
 - Pathway Strategy.

Answer: c.

Explanation:

- **Pathway Analytics:** the use of diagnostic tools that robustly measure and benchmark the effectiveness of their performance pathway.
- **Pathway Education:** provision of educational opportunities for development of coaches and managers covering topics unique to the elite developing athlete.
- **Pathway Strategy:** assists individual sports to develop and implement an aligned pathway vision and strategies from foundations level to elite podium level.

- 3) Which phase of talent identification assesses young talented athletes who have already encountered organised training?
- identification of talent stage.
 - development stage.
 - testing and selection stage.
 - intermediate stage

Answer: b.

Explanation:

Option a. is the stage of initial identification of talent. Option c. testing protocol of this stage is to hone the results identified in talent recognition stage a. Choice c. participates are already in a talented athlete training programme and so is the correct answer. The intermediate stage does not exist.

- 4) From the following choices identify the main role of national governing bodies.
- to govern their sports through the common consent of their sport.
 - to establish rules.
 - to select individuals for funding.
 - to pick teams for international competition.

Answer: a.

Explanation:

The key words here are main roles and so choice a. is about level of organisation and governance. Options b. c. are responsibilities of NGBs within the main role.

- 5) The Gold Event Series is:
- part of the Grand Prix Diamond league.
 - part of the World Class Performance Programme.
 - a talent identification programme.
 - a UK Government plan to host major international sporting events.

Answer: d.

6) What are the four key aims of Sport England?

2 marks

Answer:

- *Grow.*
- *Sustain.*
- *Excel or Start.*
- *Stay, Succeed.*

7) Identify and explain three key issues to implementing a successful nation wide athletic development programme.

3 marks

Answer:

3 marks for three of:

Identification of talent:

- *Often talent is overlooked.*
- *Talent search programmes need to be rigorous.*
- *For example, using empirical data to develop TID models that recognise the characteristics of development and excellence and that be translated from theory into practical athletic development programmes.*

Investment:

- *National Lottery funding since 1993, has invested in the development of successful a nationwide athletic development programme.*
- *Scarce resources are at times inappropriately allocated.*

Manpower:

- *Selectors/scouts are needed to identify potential talent.*
- *Technical staff, for example coaches and medical teams, are needed to sustain effective TID to elite nationwide programmes.*

World class facilities and equipment:

- *For example, multi-sport hub sites, provide the coaching environment and medical support systems.*

Support systems needed to sustain a development programme,

- *For example the EIS Performance Pathways.*
- *These pathways build and sustain highly effective systems for a nationwide athletic development programme.*

8) There are two methods of talent identification: natural selection and scientific selection. Define and explain positive and negative aspects for each method.

6 marks

Answer:

- *Natural selection is aimed at identifying talented individuals that are already participating within a sport due to the recognition of performance or scouting.*

Positive:

- *Talent is identified.*

Negative:

- *Relies on an expert eye to recognise talent.*
- *Although talent is typically identified in terms of natural outstanding performance, it is only through exposure to specific training and practice environment can it be determined if a youngster has the required attributes to succeed.*

- *Scientific selection is identification of the talented athletes based on battery test results on values that are associated with expertise within a selected sport.*

Positive:

- *Resources can be targeted at those individuals that have the greatest potential of becoming outstanding performers.*

Negative:

- *Data for establishing percentile ranking for different sporting groups has to be valid and reliable.*

9) Describe the administrative system (institutes of sport) underpinning elite sport in the UK and account for its structure.

4 marks

Answer

2 marks for:

- There is an overall administrative body of the UK called **UKSport**.
- Four **home country sports councils**, Sport England, Sport Scotland, Sports Council Wales and Sport Northern Ireland.

2 marks for two of the comments accounting for its structure:

- Need for an **overall authority**, for Olympic and international selection.
- Each of the four home countries has a tradition of **independent** status.
- Each has different needs and interests.

10) Briefly identify and describe what you think UK Sport is doing to satisfy the needs of elite British performers.

4 marks

Answer

4 marks for four of the following including a description of each:

- **Talent identification** of young people through programmes like TOPsport.
- Institution of **schools**, where **sport** is a specialism.
- Appointment of **devolved governing bodies** of sport.
- **Elite coaching** programme.
- **Athlete career** and education programme.
- State and commercial **sponsorship** schemes.
- National network **centres**.
- Use of **private sector** academies.

11) a) One of the key roles of National Governing Bodies is to produce a Whole Sport Plan. Outline the key features of a Whole Sport Plan.

3 marks

Answer:

3 marks for three of:

- A whole sport plan which should include everything relating to its particular sport, through the full range of abilities from participation at the basic level, to elite level.
- The plan must state how that sport will achieve Sport England's '**start, stay and succeed**' objectives, Use 60% of NGB funding on the 14-25 year old age group.
- The intention is to create a sporting **habit for life**.
- To be eligible for Whole Sport Plan funding, NGBs must also meet high standards of governance and financial control.

b) Select a sport and explain how this NGB has implemented a Whole Sport Plan.

3 marks

Answer:

UK Athletics

- Of the £22 million received by UK Athletics, Sport England allocated £8.8 million of the total investment for UK Athletics to get more people involved in informal running. Park run initiative is an example of a successful grassroots scheme.
- UK Athletics wants to **increase the number of talented athletes** who could go on to elite and world class level by focusing on increasing and enhancing coaching.
- And improving the domestic competition opportunities for talented disabled athletes.

- 12) Early identification of talented individuals is considered increasingly important.
Discuss the personal factors required to support progression
from talent identification to elite performance.

8 marks.

Answer:

Identifying personal factors that characterise exceptional performers can help talented individual to progress from talent identification to elite performance. Select four personal factors from the following, two marks for each factor:

- **Motivation:** motivated by high competitive drive (i.e. the will to be the best - intrinsic motivation).
- Elite athletes possess a deep need to always improve, taking their performance to the next level.

- **Initiative:** driven athletes don't wait to be given permission to do something.
- They are the leaders in all they do, setting the standard for excellence.

- **Determination:** all challenges have solutions.
- Elite athletes are actively looking for the opportunities to help them reach their goal. Failure is not an option.

- **Tough Minded:** athletes are expected to do things which stretch them all the time.
- Tough minded athletes acknowledge the discomfort, but don't let it stop them.
- Taking risks, and pushing through their comfort zone, is part of the champion mindset.

- **Strength Based Approach:** elite athletes know where they excel and use that to their advantage.
- They are able to find the best approach based upon their strengths and develop the skills necessary to minimize weaknesses.

- **Strong commitment:** is a willingness to give time and energy to something that a person believes in. Instead of viewing obstacles as problems, elite athletes approach them as challenges to be overcome.
- The goal is the primary focus. Even when no one is looking, they continue to push themselves to be the best they can.

- **Self-efficacy:** is an athlete's specific self confidence can affect their motivation and ultimate performance affects the effort and persistence put into an activity.

- **Self-confidence:** is a general feeling of trust in one's abilities, qualities, and judgement.

- **Physical prowess** and natural sporting ability are essential ingredients for elite athletes.

- **High tolerance to pain:** pushing the body to the limits.

- **High skill levels** that are consistent.

- 13) What does TASS stand for and how does it help to develop sporting talent?

3 marks

Answer:

1 mark:

- Talented Athlete Scholarship Scheme.

2 marks from two of:

- TASS is **Sport England funded partnership** between talented athletes, education institutions and national governing bodies targeting 16-25 year old age range.
- Provides **scholarships** to assist coaching and equipment costs.
- Provides a package of **core sporting services** which include coaching, sports medicine, sports science, strength and conditioning and lifestyle management.

14) Discuss the role of National Agencies in the development of an elite performer.

8 marks

Answer:

1 mark for one of:

- *There are four sports institutes in the UK:*
 - English institute for sport (EIS).
 - Scottish institute for sport (SIS).
 - Sports Institute Northern Ireland (SINI).
 - Welsh institute for sport (Athrofa Chwaraeon Cymru - ACC).

3 marks for three of:

- *Elite athletes therefore have local access (from the high performance Centres) to expert support services:*
 - Sports medicine.
 - Physiotherapy.
 - Soft tissue therapy.
 - Nutrition.
 - Psychology.
 - Biomechanics.
 - Performance analysis.
 - Talent identification.
 - Strength and conditioning.
 - Performance lifestyle.

4 marks for four of:

- The main role of these agencies is to *provide elite sports services* to elite members of sports national squads.
- These services are given *across all sports*, based on the elite multisport hubs spread around the UK.
- There are 9 hubs in England, and one each in Wales, Scotland and Northern Ireland.
- Some sports in the UK adopt the *centralised system* with one or two centres in the UK for that sport (for example, cycling in Manchester, and swimming at Loughborough).
- The *governing body* organises the coaching and technical elements, and the EIS service providers work in close consultation with the national governing body of the sport and performance directors, coaches, and the athletes themselves.
- They also provide *support to athletes* not only on home soil but also when they travel to overseas camps and competitions at the request of the national governing body.
- Sports with a wider base (such as athletics) use a wider (*decentralised*) hub-based model, each of which has the EIS support as outlined above.
- *Sports support by National Agencies includes:*
 - All summer Olympic sports with the exception of tennis and men's football.
 - All Paralympic sports.
 - A limited number of Winter Olympic and English sports.
- The majority of the athletes we support are those who are UK Sport Lottery funded.
- The EIS (and other Institutes) are grant funded through the UK Sport Lottery Fund.

- 15) The UK World Class Programme that supports elite athletes, relies on the services of the three main areas of sport science, namely physiology, sport psychology and biomechanics. Discuss the ways in which an elite athlete can use these services to improve his or her sporting performance.

15 marks

Answer:

The answer to this question draws on content from this and previous chapters, 4 marks for each section.

Physiology services:

- Traditionally **physiological testing**, such as physical and motor fitness components, have been and are still used to determine an athlete's **physical performance capacity**.
- Measuring physiological parameters such as **oxygen uptake** ($\dot{V}O_{2max}$), **peak power** and **anaerobic capacity**.
- Using a battery of valid fitness tests exposes weaknesses and strengths of athlete.
- And enables the coach/athlete to assess the effects of training programmes.
- The emergence of **sports science laboratories** now offers a wide range of support services ranging from **hypobaric chambers** that simulate high altitude atmospheres, **body scanners** and **EVH** physiological testing.
- Technologies such as hypobaric chambers enable sports scientists to assess an athlete's reaction when facing extreme environmental conditions.
- The **body scanner** and 'bod pod' offer the most accurate method of calculating body composition.
- Scanners can also be used to check for possible stress fractures that can result from high repetitive training programmes.
- And give the athlete/coach specific advice on **lifestyle** and training programmes.
- **Physiotherapy** is long standing service that is mainly concerned with **injury** and rehabilitation that elite athletes are prone to.
- Sport **masseurs** provide the day-to-day relief and treatment of muscle soreness and aid recovery from hard training sessions.
- **Acupuncture** is also used to relieve pain.
- Elite athletes are fully supported by these dedicated practitioners.
- **Nutritional** advice is another support service that enables an elite performer to know what, when and how much to eat, prior to and following competition and training sessions.
 - For example, choosing the right food and fluid intake prior to, during and after a marathon race.
 - Techniques such as **glycogen supercharging** prior to the an endurance event.
- Other legal physiological therapies include the use of **ice baths** and ice belts.
- These therapies are used to **reduce** joint and muscle **tissue inflammation**.
- Cooling jackets are used to attempt to reduce core temperature of sports participants in very **hot conditions**.

Psychology services:

- This is a recognised and growing support service, since most elite performers will have access to a sports psychologist.
- **Mental preparation** is deemed to be just as important as the physiological and biomechanical support services.
- A sports psychologist can assist in coping with **stress** by using stress management techniques.
- Establishing short and long-term **goals**.
- Using techniques such as **performance profiling**, may establish perception discrepancies between performer and coach.
- **Visualisation** techniques help with the cognitive rehearsal of a skill without actual physical movement.
- And so can be used to cement and enhance the **learning of difficult skills**.
- Dealing with **injury** and poor performances are both mental and physical low points for the elite athlete.
- A sports psychologist can support the elite athlete by enhancing the personality components of **achievement motivation**.
- By dealing with the need to avoid failure (*Nach*) and promoting the need to achieve (*Nach*).

Biomechanical services:

- Biomechanical technology has made a big impact in supporting the elite athlete, both in the **refinement of technique** and in the design of kit and equipment.
- **Motion analysis** systems, such as produced by Dartfish or Quintic, examine body and limb angles, comparing an athlete's technique with the 'perfect' technical model.
- The Prozone analysis system provides technical and tactical **feedback** for team sports.
- **Force plate** technology provides information about the pattern of force made by a foot striking a plate and can be applied to technologies such as biomechanical foot placement efficiency and the design of personalised footwear.
- Data from **wind tunnel** technology provides feedback to change/adjust the design of the aerodynamics elements of sports equipment and gives feedback such as optimal riding postures.
- Therefore these three main areas of sports science can make a small but significant difference to the performance of an elite athlete.

16) Describe a talent identification programme implemented by a UK governing body of sport.

5 marks

Answer:

Note there are many models used for talent for identification, but all have a common pathway from novice to elite performance.

- England **netball** talent identification programme that is based around **academies**.
- **Satellite academies:** County Netball Associations select young potential talented netballers to learn how to train on their own, and to understand, experience and practice some of the different components required in a training programme.
- **County academies:** From this cohort, talented players enter the County Academy that manage and deliver the training programmes set by England Netball (15-30 sessions per year) providing athletes with the support and skill set they need to progress to the next level of the pathway, the Regional Academy.
- **Regional Academies:** are located across the country and operate year round individualised training environments for athletes, delivering between 3-4 hours per week of coaching. There will be up to 20 athletes in each of the Regional Academies, some of whom will also attend National Academy training and may be part of the U19/U17 England Squads.
- **Regional Performance Academies** deliver between 5-7 hours per week of coaching.
- There will be up to 20 athletes in each of the Regional Performance Academies, some of whom will also attend National Academy training and may be part of the U19/U17 England Squads.
- The **National Academy** operates via centralised and weekend camps, bringing together the best U17 and U19 players in England for extra coaching and training. It also provides athletes with an opportunity to access similar support services that are available to senior athletes, for example, individualised strength and conditioning programmes, on-site physiotherapy, performance lifestyle and medical services.
- Prior to tours and Netball Europe, U19 and U17 squads will be **selected** from the National Academy.

- 17) The modern Olympic Games have changed in nature and size since the 1896 Athens Olympic Games. Explain the social factors and the support programmes in the UK that encourage the development of elite athletes and increase the chance of winning medals.

15 marks

Answer:

Social factors:

5 marks for five of:

- **Parental/family/peer support.**
- **Socio-economic status (SES)/social class.**
- **Equal opportunities**, such as sport equity policies to encourage under-represented minority groups to participate in sport.
- **Educational providers:** Influence of school sport -intra and extra-curriculum programmes.
- **Sports coaches** assisting athletes in developing their full potential.
- Athlete **mentors** providing role models.
- **Grass roots initiatives** such as Every Girl Can and Street Games..
- Structured levels of **competition** from grass route participation level to national finals.
- **Status** of the sport in terms of media coverage to raise the status of a sport.

Support programmes:

10 marks for ten of:

- Role of **County School partnerships** in developing satellite clubs that link school and sports clubs. .
- **Sports club networks** providing facilities, coaching and competition.
- **Funding:**
 - Public via the National Lottery.
 - Private: via scholarships/sponsorships.
- **Sport England** coordinating development from participation to elite level.
- Role of **UK Sport** and UKSIs coordinating the development of elite sport and provision of support services.
 - A coordinated approach of sports organisations that work together. For example UK Sport, UKSI, Sport England, NGBs, EIS, BOA, Sports Coach UK.
- **Talented Athlete Scholarship Scheme:** a Sport England funded partnership between talented athletes, education institutions and national governing bodies targeting 16-25 year old age range.
- **Whole Sport Plan** that each NGB must have in order to access funding. This plan includes grass roots development to elite performance in the context of grow, sustain and excel.
- High quality **facilities:** for example UKSI multi-sport hub at Bisham Abbey National Sports Centre.
- **Talent identification Programmes** such as the Army Elite Sport Programme that aims to identify and develop future Olympic medallists for the Tokyo 2020 Olympics.
- **Performance pathways:** for example EIS Performance Pathways that develop talented athletes by providing support systems. For example Pathway Education: provision of educational opportunities for development of coaches and managers covering topics unique to the elite developing athlete.
 - For example: World Class Podium designed to support sports and athletes with realistic medal capabilities at Olympic Games, or realistic gold medal capabilities at Paralympic Games, and are a maximum of four years away from the podium.
- **NGB's** links to international governing bodies (IGBs). For example Athletics UK to IAAF
- **Performance lifestyle programmes** that aim to help the individual to develop skills to effectively manage all their commitments.
- **Research and development** programmes such the development of playing surfaces, equipment and clothing design.
- **Sports science** and medical support teams: biomechanics. sports psychology, nutritional advice and physiotherapy.

18) Identify the roles of government and lottery funding in the development of elite performers within the UK.

6 marks

Answer:

- The government provides *exchequer income* (from central receipts of taxes from the people in Britain) to Sport England, Wales, Scotland and Northern Ireland.
- Exchequer income is used to support UK Sport's world class *coaching* strategies and *medicine* and *sport's science*.
- Exchequer income is used to develop *initiatives*, such as *School Games* programme, to increase *opportunities* for more young people to play competitive sport at the *base* of the Sporting Pyramid.
- Exchequer income has been used to build first major world class *facilities*, for example, the stadium facilities for the Olympic Games, London 2012.
- Lottery funding is used to *maximise the performance* of UK athletes by supporting supports the elite athletes with *lifestyle* needs.
- Lottery funding also contributes the development of *sports academies*.
- Both National Lottery and Exchequer income invest funds in the *World Class Programme*.