UNITS 1 & 2

PHYSICAL EDUCATION FOR QUEENSLAND

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obook assess

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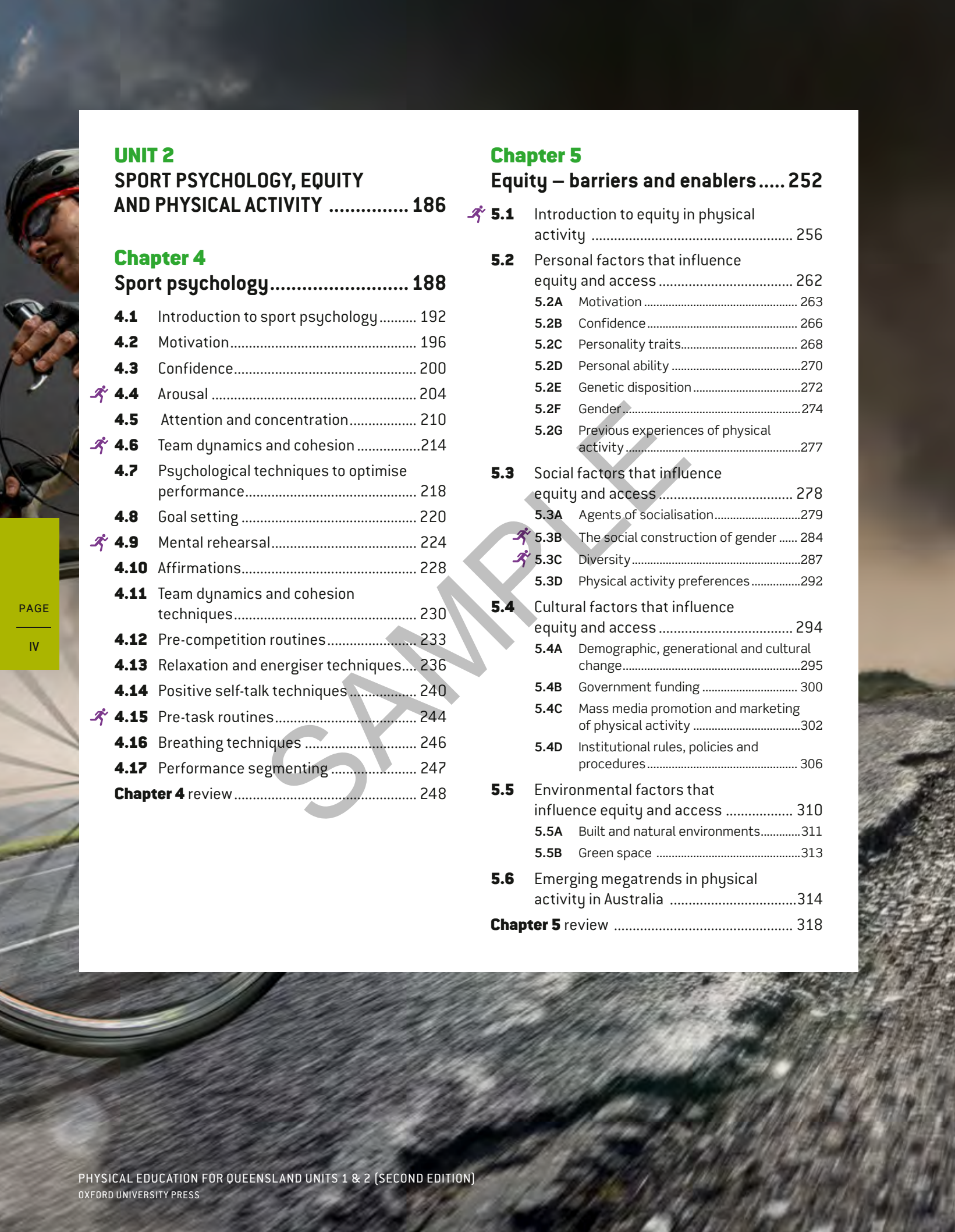
PERFORMANCE — This section is supported by an integrated physical activity known as a Skill Drill.



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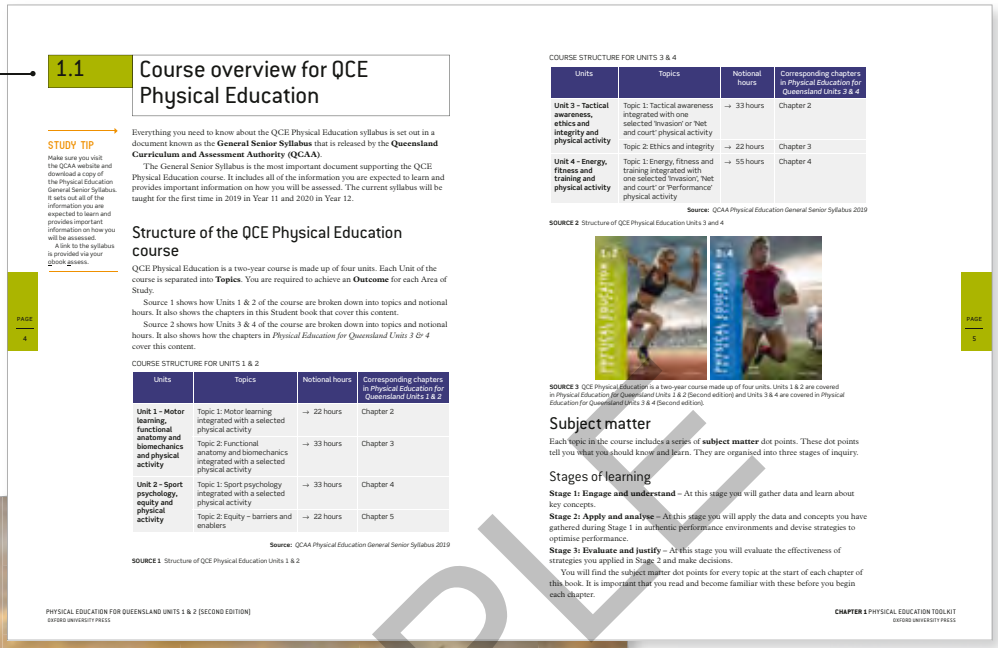
Using *Physical Education for Queensland Units 1 & 2*

Physical Education for Queensland has been purpose-written to meet the requirements of the QCAA Physical Education General Senior Syllabus.

Key features of the Student book

Physical Education toolkit
The Student book begins with a stand-alone reference chapter that includes:

- an overview of the QCAA Physical Education syllabus
- tips for success on assessment tasks
- advice on understanding cognitive verbs
- a summary of the importance of data in the QCE Physical Education course.



1.1 Course overview for QCE Physical Education

STUDY TIP
Make sure you visit the QCAA website and download a copy of the Physical Education General Senior Syllabus. It sets out all of the information you are expected to learn and provides important information on how you will be assessed.
A link to the syllabus is provided via your obook assess.

Everything you need to know about the QCE Physical Education syllabus is set out in a document known as the **General Senior Syllabus** that is released by the **Queensland Curriculum and Assessment Authority (QCAA)**.

The General Senior Syllabus is the most important document supporting the QCE Physical Education course. It includes all of the information you are expected to learn and provides important information on how you will be assessed. The current syllabus will be taught for the first time in 2019 in Year 11 and 2020 in Year 12.

Structure of the QCE Physical Education course

QCE Physical Education is a two-year course is made up of four units. Each Unit of the course is separated into **Topics**. You are required to achieve an **Outcome** for each Area of Study.

Source 1 shows how Units 1 & 2 of the course are broken down into topics and notional hours. It also shows the chapters in this Student book that cover this content.

Source 2 shows how Units 3 & 4 of the course are broken down into topics and notional hours. It also shows how the chapters in *Physical Education for Queensland Units 3 & 4* cover this content.

COURSE STRUCTURE FOR UNITS 1 & 2

Units	Topics	Notional hours	Corresponding chapters in *Physical Education for Queensland Units 1 & 2*
Unit 1 – Motor learning, functional anatomy and biomechanics and physical activity	Topic 1: Motor learning integrated with a selected physical activity	→ 22 hours	Chapter 2
	Topic 2: Functional anatomy and biomechanics integrated with a selected physical activity	→ 33 hours	Chapter 3
Unit 2 – Sport psychology, equity and physical activity	Topic 1: Sport psychology integrated with a selected physical activity	→ 33 hours	Chapter 4
	Topic 2: Equity – barriers and enablers	→ 22 hours	Chapter 5

Source: *QCAA Physical Education General Senior Syllabus 2019*

SOURCE 1 Structure of QCE Physical Education Units 1 & 2

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COURSE STRUCTURE FOR UNITS 3 & 4

Units	Topics	Notional hours	Corresponding chapters in *Physical Education for Queensland Units 3 & 4*
Unit 3 – Tactical awareness, ethics and integrity and physical activity	Topic 1: Tactical awareness integrated with one selected 'invasion' or 'Net and court' physical activity	→ 33 hours	Chapter 2
	Topic 2: Ethics and integrity	→ 22 hours	Chapter 3
Unit 4 – Energy, fitness and training and physical activity	Topic 1: Energy, fitness and training integrated with one selected 'invasion', 'Net and court' or 'Performance' physical activity	→ 55 hours	Chapter 4

Source: *QCAA Physical Education General Senior Syllabus 2019*

SOURCE 2 Structure of QCE Physical Education Units 3 and 4

SOURCE 3 QCE Physical Education is a two-year course made up of four units. Units 1 & 2 are covered in *Physical Education for Queensland Units 1 & 2* (Second edition) and Units 3 & 4 are covered in *Physical Education for Queensland Units 3 & 4* (Second edition).

Subject matter

Each topic in the course includes a series of **subject matter** dot points. These dot points tell you what you should know and learn. They are organised into three stages of inquiry.

Stages of learning

Stage 1: Engage and understand – At this stage you will gather data and learn about key concepts.

Stage 2: Apply and analyse – At this stage you will apply the data and concepts you have gathered during Stage 1 in authentic performance environments and devise strategies to optimise performance.

Stage 3: Evaluate and justify – At this stage you will evaluate the effectiveness of strategies you applied in Stage 2 and make decisions.

You will find the subject matter dot points for every topic at the start of each chapter of this book. It is important that you read and become familiar with these before you begin each chapter.

CHAPTER 1 PHYSICAL EDUCATION TOOLKIT
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Unit openers
Each unit begins with a unit opener that includes:

- **unit objectives** from the syllabus
- an **overview of notional hours** and **topics** in the unit.

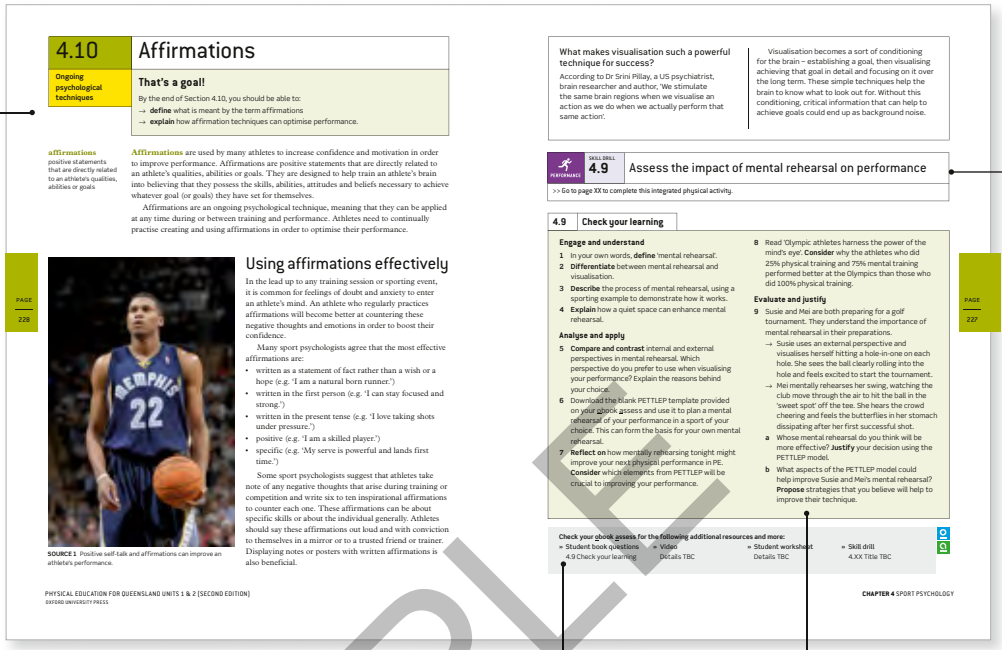
Chapter openers
Each chapter begins with a chapter opener that includes:

- key terms from the syllabus
- an inspirational quote to spark discussion
- links to relevant digital resources provided on the obook
- a content grid that shows the coverage of all subject matter from the syllabus.

Skill Drill links – direct links to practical activities (provided in a handy reference section at the back of the Student book)

Section-based approach
Content throughout the Student book is presented in clearly structured **sections**. Each section:

- is clearly labelled and numbered to help navigation
- ranges in length from 2–10 pages.



4.10 Affirmations

Ongoing psychological techniques

That's a goal!

By the end of Section 4.10, you should be able to:
→ **define** what is meant by the term affirmations
→ **explain** how affirmation techniques can optimise performance.

affirmations positive statements that are directly related to an athlete's qualities, abilities or goals

Affirmations are used by many athletes to increase confidence and motivation in order to improve performance. Affirmations are positive statements that are directly related to an athlete's qualities, abilities or goals. They are designed to help train an athlete's brain into believing that they possess the skills, abilities, attitudes and beliefs necessary to achieve whatever goal (or goals) they have set for themselves.

Affirmations are an ongoing psychological technique, meaning that they can be applied at any time during or between training and performance. Athletes need to continually practise creating and using affirmations in order to optimise their performance.

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SOURCE 1 Positive self-talk and affirmations can improve an athlete's performance.

Using affirmations effectively

In the lead up to any training session or sporting event, it is common for feelings of doubt and anxiety to enter an athlete's mind. An athlete who regularly practices affirmations will become better at countering these negative thoughts and emotions in order to boost their confidence.

Many sport psychologists agree that the most effective affirmations are:

- written as a statement of fact rather than a wish or a hope (e.g. 'I am a natural born runner.')
- written in the first person (e.g. 'I can stay focused and strong.')
- written in the present tense (e.g. 'I love taking shots under pressure.')
- positive (e.g. 'I am a skilled player.')
- specific (e.g. 'My serve is powerful and lands first time.')

Some sport psychologists suggest that athletes take note of any negative thoughts that arise during training or competition and write six to ten inspirational affirmations to counter each one. These affirmations can be about specific skills or about the individual generally. Athletes should say these affirmations out loud and with conviction to themselves in a mirror or to a trusted friend or trainer. Displaying notes or posters with written affirmations is also beneficial.

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What makes visualisation such a powerful technique for success?

According to Dr Srini Pillay, a US psychiatrist, brain researcher and author, 'We stimulate the same brain regions when we visualise an action as we do when we actually perform that same action'.

Visualisation becomes a sort of conditioning for the brain – establishing a goal, then visualising achieving that goal in detail and focusing on it over the long term. These simple techniques help the brain to know what to look out for. Without this conditioning, critical information that can help to achieve goals could end up as background noise.

PERFORMANCE SKILL DRILL 4.9 Assess the impact of mental rehearsal on performance

>> Go to page XX to complete this integrated physical activity.

4.9 Check your learning

Engage and understand

1 In your own words, **define** 'mental rehearsal'.
2 **Differentiate** between mental rehearsal and visualisation.
3 **Describe** the process of mental rehearsal, using a sporting example to demonstrate how it works.
4 **Explain** how a quiet space can enhance mental rehearsal.

Analyse and apply

5 **Compare and contrast** internal and external perspectives in mental rehearsal. Which perspective do you prefer to use when visualising your performance? Explain the reasons behind your choice.
6 Download the blank PETTLEP template provided on your obook assess and use it to plan a mental rehearsal of your performance in a sport of your choice. This can form the basis for your own mental rehearsal.
7 **Reflect on** how mentally rehearsing tonight might improve your next physical performance in PE. **Consider** which elements from PETTLEP will be crucial to improving your performance.
8 Read 'Olympic athletes harness the power of the mind's eye'. **Consider** why the athletes who did 25% physical training and 75% mental training performed better at the Olympics than those who did 100% physical training.

Evaluate and justify

9 Susie and Mei are both preparing for a golf tournament. They understand the importance of mental rehearsal in their preparations.
→ Susie uses an external perspective and visualises herself hitting a hole-in-one on each hole. She sees the ball clearly rolling into the hole and feels excited to start the tournament.
→ Mei mentally rehearses her swing, watching the club move through the air to hit the ball in the 'sweet spot' off the tee. She hears the crowd cheering and feels the butterflies in her stomach dissipating after her first successful shot.
a Whose mental rehearsal do you think will be more effective? **Justify** your decision using the PETTLEP model.
b What aspects of the PETTLEP model could help improve Susie and Mei's mental rehearsal? **Propose** strategies that you believe will help to improve their technique.

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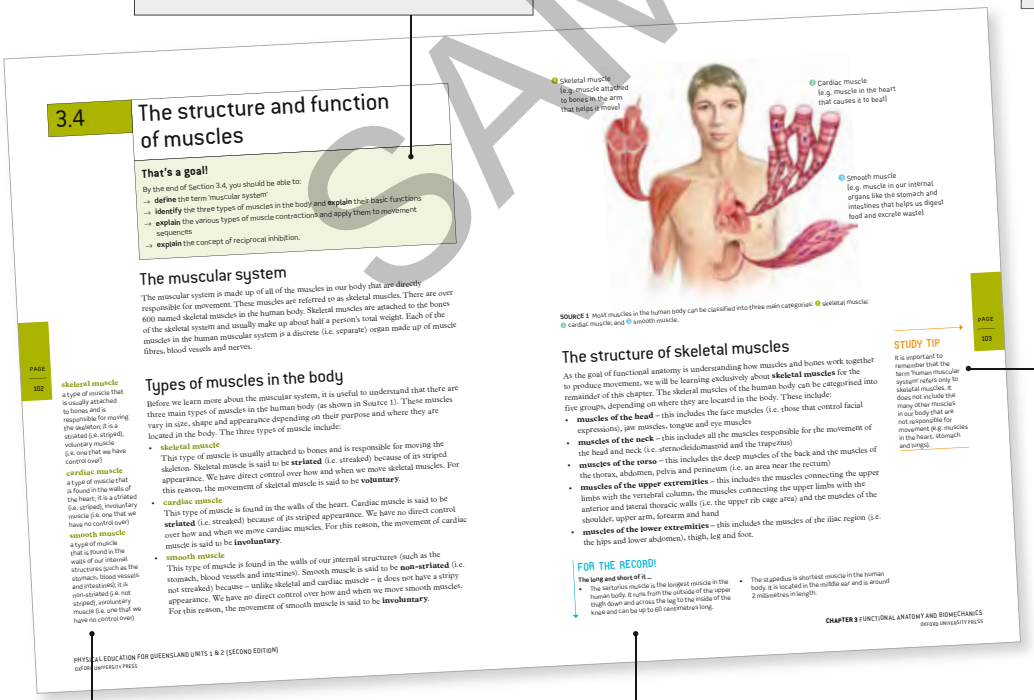
Check your obook assess for the following additional resources and more:
» Student book questions 4.9 Check your learning
» Video Details TBC
» Student worksheet Details TBC
» Skill drill 4.XX Title TBC

CHAPTER 4 SPORT PSYCHOLOGY

Links to supporting digital resources – additional student and teacher resources offered on obook assess

Check your learning – activity boxes with questions and tasks organised according to Marzano's taxonomy and using cognitive verbs

That's a goal! – a set of clear **learning objectives** from the syllabus



3.4 The structure and function of muscles

That's a goal!

By the end of Section 3.4, you should be able to:
→ **define** the term 'muscular system'
→ **identify** the three types of muscles in the body and **explain** their basic functions
→ **explain** the various types of muscle contractions and apply them to movement sequences
→ **explain** the concept of reciprocal inhibition.

The muscular system

The muscular system is made up of all of the muscles in our body that are directly responsible for movement. These muscles are referred to as skeletal muscles. There are over 600 named skeletal muscles in the human body. Skeletal muscles are attached to the bones of the skeletal system and usually make up about half a person's total weight. Each of the muscles in the human muscular system is a discrete (i.e. separate) organ made up of muscle fibres, blood vessels and nerves.

PAGE 102

skeletal muscle a type of muscle that is usually attached to bones and is responsible for moving the skeleton; it is a striated (i.e. striped), voluntary muscle (i.e. one that we have control over)
cardiac muscle a type of muscle that is found in the walls of the heart; it is a striated (i.e. striped), involuntary muscle (i.e. one that we have no control over)
smooth muscle a type of muscle that is found in the walls of our internal structures (such as the stomach, blood vessels and intestines); it is non-striated (i.e. not striped), involuntary muscle (i.e. one that we have no control over)

Types of muscles in the body

Before we learn more about the muscular system, it is useful to understand that there are three main types of muscles in the human body (as shown in Source 1). These muscles vary in size, shape and appearance depending on their purpose and where they are located in the body. The three types of muscle include:

- **skeletal muscle**
  This type of muscle is usually attached to bones and is responsible for moving the skeleton. Skeletal muscle is said to be **striated** (i.e. streaked) because of its striped appearance. We have direct control over how and when we move skeletal muscles. For this reason, the movement of skeletal muscle is said to be **voluntary**.
- **cardiac muscle**
  This type of muscle is found in the walls of the heart. Cardiac muscle is said to be **striated** (i.e. streaked) because of its striped appearance. We have no direct control over how and when we move cardiac muscles. For this reason, the movement of cardiac muscle is said to be **involuntary**.
- **smooth muscle**
  This type of muscle is found in the walls of our internal structures (such as the stomach, blood vessels and intestines). Smooth muscle is said to be **non-striated** (i.e. not streaked) because – unlike skeletal and cardiac muscle – it does not have a striped appearance. We have no direct control over how and when we move smooth muscles. For this reason, the movement of smooth muscle is said to be **involuntary**.

1 Skeletal muscle (e.g. muscle attached to bones in the arm that helps it move)
2 Cardiac muscle (e.g. muscle in the heart that causes it to beat)
3 Smooth muscle (e.g. muscle in our internal organs like the stomach and intestines that helps us digest food and excrete waste)

SOURCE 1 Most muscles in the human body can be classified into three main categories: 1 skeletal muscle; 2 cardiac muscle; and 3 smooth muscle.

The structure of skeletal muscles

As the goal of functional anatomy is understanding how muscles and bones work together to produce movement, we will be learning exclusively about **skeletal muscles** for the remainder of this chapter. The skeletal muscles of the human body can be categorised into five groups, depending on where they are located in the body. These include:

- **muscles of the head** – this includes the face muscles (i.e. those that control facial expressions), jaw muscles, tongue and eye muscles
- **muscles of the neck** – this includes all the muscles responsible for the movement of the head and neck (i.e. sternocleidomastoid and the trapezius)
- **muscles of the torso** – this includes the deep muscles of the back and the muscles of the thorax, abdomen, pelvis and perineum (i.e. an area near the rectum)
- **muscles of the upper extremities** – this includes the muscles connecting the upper limbs with the vertebral column, the muscles connecting the upper limbs with the anterior and lateral thoracic walls (i.e. the upper rib cage area) and the muscles of the shoulder, upper arm, forearm and hand
- **muscles of the lower extremities** – this includes the muscles of the iliac region (i.e. the hips and lower abdomen), thigh, leg and foot.

FOR THE RECORD!

The long and short of it ...

- The sartorius muscle is the longest muscle in the human body. It runs from the outside of the upper thigh down and across the leg to the inside of the knee and can be up to 60 centimetres long.
- The stapedius is shortest muscle in the human body. It is located in the middle ear and is around 2 millimetres in length.

STUDY TIP

It is important to remember that the term 'human muscular system' refers only to skeletal muscles. It does not include the many other muscles in our body that are not responsible for movement (e.g. muscles in the heart, stomach and lungs).

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CHAPTER 3 FUNCTIONAL ANATOMY AND BIOMECHANICS OXFORD UNIVERSITY PRESS

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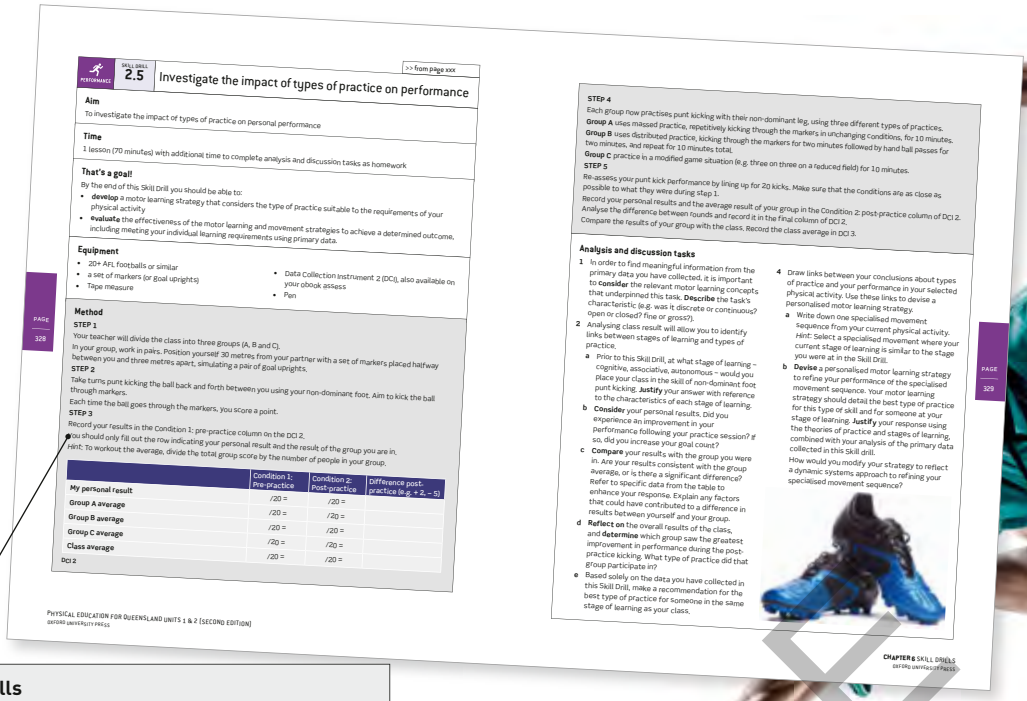
Study tip – practical advice to help students improve their performance in assessment tasks

Margin glossary – key terms bolded in text and defined on the page

For the record! – fun, interesting and quirky facts related to key subject matter


PERFORMANCE SKILL DRILL 2.5

Investigate the impact of types of practice on performance

>> from page xxx

Aim

To investigate the impact of types of practice on personal performance

Time

1 lesson (70 minutes) with additional time to complete analysis and discussion tasks as homework

That's a goal!

By the end of this Skill Drill you should be able to:

- **develop** a motor learning strategy that considers the type of practice suitable to the requirements of your physical activity
- **evaluate** the effectiveness of the motor learning and movement strategies to achieve a determined outcome, including meeting your individual learning requirements using primary data.

Equipment

- 20+ AFL footballs or similar
- a set of markers (or goal uprights)
- Tape measure
- Data Collection Instrument 2 (DCI), also available on your obook assess
- Pen

Method

STEP 1

Your teacher will divide the class into three groups (A, B and C).

In your group, work in pairs. Position yourself 30 metres from your partner with a set of markers placed halfway between you and three metres apart, simulating a pair of goal uprights.

STEP 2

Take turns punt kicking the ball back and forth between you using your non-dominant foot. Aim to kick the ball through markers.

Each time the ball goes through the markers, you score a point.

STEP 3

Record your results in the Condition 1: pre-practice column on the DCI 2.

You should only fill out the row indicating your personal result and the result of the group you are in.

Hint: To workout the average, divide the total group score by the number of people in your group.

	Condition 1: Pre-practice	Condition 2: Post-practice	Difference post-practice (e.g. + 2, – 5)
My personal result	/20 =	/20 =	
Group A average	/20 =	/20 =	
Group B average	/20 =	/20 =	
Group C average	/20 =	/20 =	
Class average	/20 =	/20 =	

DCI 2

STEP 4

Each group now practises punt kicking with their non-dominant leg, using three different types of practices.

Group A uses massed practice, repetitively kicking through the markers in unchanging conditions, for 10 minutes.

Group B uses distributed practice, kicking through the markers for two minutes followed by hand ball passes for two minutes, and repeat for 10 minutes total.

Group C practice in a modified game situation (e.g. three on three on a reduced field) for 10 minutes.

STEP 5

Re-assess your punt kick performance by lining up for 20 kicks. Make sure that the conditions are as close as possible to what they were during step 1.

Record your personal results and the average result of your group in the Condition 2: post-practice column of DCI 2.

Analyse the difference between rounds and record it in the final column of DCI 2.

Compare the results of your group with the class. Record the class average in DCI 3.

Analysis and discussion tasks

1 In order to find meaningful information from the primary data you have collected, it is important to **consider** the relevant motor learning concepts that underpinned this task. **Describe** the task's characteristic (e.g. was it discrete or continuous? Open or closed? Fine or gross?).

2 Analysing class result will allow you to identify links between stages of learning and types of practice.

a Prior to this Skill Drill, at what stage of learning – cognitive, associative, autonomous – would you place your class in the skill of non-dominant foot punt kicking. **Justify** your answer with reference to the characteristics of each stage of learning.

b **Consider** your personal results. Did you experience an improvement in your performance following your practice session? If so, did you increase your goal count?

c **Compare** your results with the group you were in. Are your results consistent with the group average, or is there a significant difference? Refer to specific data from the table to enhance your response. Explain any factors that could have contributed to a difference in results between yourself and your group.

d **Reflect on** the overall results of the class, and **determine** which group saw the greatest improvement in performance during the post-practice kicking. What type of practice did that group participate in?

e Based solely on the data you have collected in this Skill Drill, make a recommendation for the best type of practice for someone in the same stage of learning as your class.

4 Draw links between your conclusions about types of practice and your performance in your selected physical activity. Use these links to devise a personalised motor learning strategy.

a Write down one specialised movement sequence from your current physical activity.
Hint: Select a specialised movement where your current stage of learning is similar to the stage you were at in the Skill Drill.

b **Devise** a personalised motor learning strategy to refine your performance of the specialised movement sequence. Your motor learning strategy should detail the best type of practice for this type of skill and for someone at your stage of learning. **Justify** your response using the theories of practice and stages of learning, combined with your analysis of the primary data collected in this Skill drill.

How would you modify your strategy to reflect a dynamic systems approach to refining your specialised movement sequence?

Skill Drills

Each chapter contains a range of practical activities to reinforce theoretical aspects of the syllabus. These activities have a clear Research or Performance focus and are identified as such. They are flagged in relevant sections and cross-referenced to a stand-alone Skill Drill section at the end of the Student book. Each Skill Drill features:

- an **integrated** and **personalised task**
- links to **subject matter** coverage
- a consistent experiment-style layout
- a range of **Game Performance Assessment Instruments (GPAIs)** and **Data Collection Instruments (DCIs)** to support the collection of primary data
- a range of analysis and discussion tasks.

In the news – relevant issues and examples being reported and debated in the media

participation (such as having to purchase compulsory uniforms or pay high membership fees) act as a barrier to children from low income households. Certain institutions can also implement and enforce policies about wearing certain uniforms that make some athletes feel uncomfortable or go against their religious beliefs. These are also barriers.

An example of a sporting institution creating and enforcing a policy is discussed in the following news article.

IN THE NEWS

Caster Semenya: IAAF rules to limit testosterone levels for female runners

AP/REUTERS, ABC NEWS, 26 APRIL 2018

The International Association of Athletics Federations (IAAF) has published new rules for female athletes with high natural testosterone levels which could force two-time Olympic 800-metre champion Caster Semenya to stop running middle-distance races.

From November 1, the IAAF will limit entry for all international events from 400 metres through the mile (1500 metres) to women with testosterone levels below a specified level.

Women with elevated testosterone must reduce their level for "six months (e.g. by use of hormonal contraceptives) before being eligible to run, and maintain that lowered level.

IAAF president Sebastian Coe says track's governing body must "ensure a level playing field where success is determined by talent, dedication and hard work rather than other contributing factors."

"We want athletes to be incentivised to make the huge commitment and sacrifice required to excel in the sport, and to inspire new generations to join the sport and aspire to the same excellence," he said.

Semenya now faces taking daily medication or start racing for South Africa at 5000 metres.

Semenya, double Olympic and triple world champion over 800 metres and who completed the 800–1500 double at the Commonwealth Games this month, responded to the new rules on Twitter, saying "I am 97 per cent sure you don't like me but I'm 100 per cent sure I don't care."

Athletics authorities have struggled to find a solution to the issue that respected the rights of Semenya while also providing what they say is a level playing field.

Other athletes believe she has an unfair advantage because of the high levels of naturally occurring testosterone in her body. But, under the new rules Semenya will either have to take prescribed medication to compete at her event or move to longer-distance running.

SOURCE 17 Some athletes think that Caster Semenya's high levels of naturally occurring testosterone give her an unfair advantage.

Theory in action – **real-life examples** and **case studies** to illustrate theoretical points being explained in the text

The influence of siblings is also significant in determining a child's sporting choices. It is common for younger children to be interested in the same sports and activities as their older siblings. Parents often encourage this, as having two children choosing the same sport can be more convenient and offer cost savings. This can be a barrier for some younger siblings who may not end up pursuing the sport they would prefer. In some cases, siblings can also be a negative influence. For example, when there is a clear difference in ability from one sibling to another, the less-able sibling can feel inadequate. This has been known to discourage young athletes from trying their hardest or continuing in the sport. The Theory in action below further explores how parents and peers act as enablers of physical activity.

Theory in action Agents of socialisation as barriers and enablers of physical activity

Siblings Ella and Liam Green from Siena Catholic College on the Sunshine Coast reflect on the ways in which agents of socialisation have acted as barriers and enablers of physical activity.

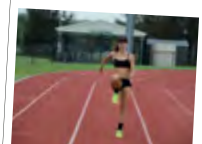
Ella Green, 17 years old

'Both of my parents were very athletic growing up and continue to follow sports today, so when they heard that I wanted to take on competitive running they were ecstatic. My parents supported me financially. Most importantly, my parents emotionally supported me; always making the time to come and watch me train and compete, rain, hail or shine. When training became a challenge, or my performance dipped, the support from my parents was crucial to helping me keep sight of my goals. When I reflect on my athletics experiences – my opportunities to participate at a regional, state and national level – my parents are a part of those wonderful memories.'

Liam Green, 15 years old

In Term 1 of Year 7, we were told to select a Wednesday afternoon sport option for the semester and I chose rugby league. I had never played a contact sport before and wanted to try it out, so after a bit of convincing and pleading with my mum I tried out for the team and was successful.

I played on the wing and in the first game I scored two tries and was instantly hooked, even though the tries were nothing to do with skill – they were more about speed and size, as I was taller than the average for boys of my age. After that game, all my friends wanted me to play rugby union for school and club. At the time, my sister was involved with multiple sports, mainly athletics, and we couldn't make it to many of the games so that meant I couldn't play. However, a few years later I was finally able to sign up and I am now playing in the U/16 rugby team. All the boys from my school that were playing for the University Club aren't playing now, because they want to concentrate on their studies, but I'm grateful to them for their encouragement in Year 7 because I may never have given rugby union a go otherwise. Now it's a sport that I have come to love and will continue to play for as long as possible.



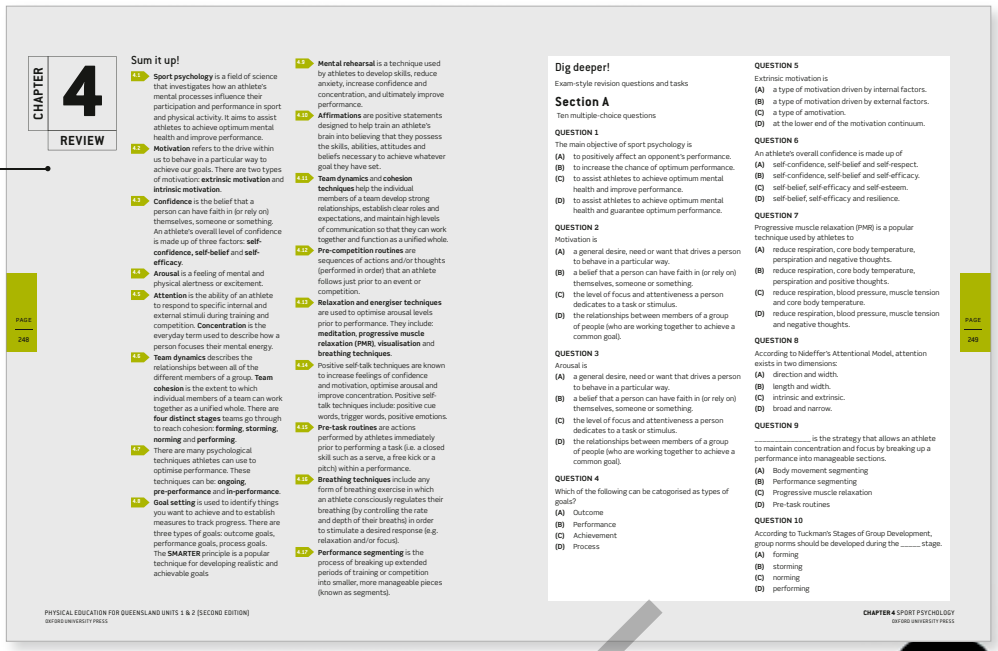
SOURCE 4 The support from Ella Green's parents has been a strong enabler for her participation and success in athletics.

SOURCE 5 Liam Green was enticed into the game of rugby union by his friends. Peer influence, when positive, can act as a strong enabler.

Chapter reviews

Each chapter concludes with a chapter review that includes:

- a **summary of key learning** (with links back to relevant sections in the Student book for targeted revision)
- revision questions in the form of a **sample exam**
- a **sample assessment task with ISMG**.



CHAPTER 4 REVIEW

Sum it up!

4.1 **Sport psychology** is a field of science that investigates how an athlete's mental processes influence their participation and performance in sport and physical activity. It aims to assist athletes to achieve optimum mental health and improve performance.

4.2 **Motivation** refers to the drive within us to behave in a particular way to achieve our goals. There are two types of motivation: **extrinsic motivation** and **intrinsic motivation**.

4.3 **Confidence** is the belief that a person can have faith in (or rely on) themselves, someone or something. An athlete's overall level of confidence is made up of three factors: **self-confidence, self-belief** and **self-efficacy**.

4.4 **Arousal** is a feeling of mental and physical alertness or excitement.

4.5 **Attention** is the ability of an athlete to respond to specific internal and external stimuli during training and competition. **Concentration** is the everyday term used to describe how a person focuses their mental energy.

4.6 **Team dynamics** describes the relationships between all of the different members of a group. **Team cohesion** is the extent to which individual members of a team can work together as a unified whole. There are **four distinct stages** teams go through to reach cohesion: **forming**, **storming**, **norming** and **performing**.

4.7 There are many psychological techniques athletes can use to optimise performance. These techniques can be: **ongoing**, **pre-performance** and **in-performance**.

4.8 **Goal setting** is used to identify things you want to achieve and to establish measures to track progress. There are three types of goals: outcome goals, performance goals, process goals. The **SMARTER** principle is a popular technique for developing realistic and achievable goals

4.9 **Mental rehearsal** is a technique used by athletes to develop skills, reduce anxiety, increase confidence and concentration, and ultimately improve performance.

4.10 **Affirmations** are positive statements designed to help train an athlete's brain into believing that they possess the skills, abilities, attitudes and beliefs necessary to achieve whatever goal they have set.

4.11 **Team dynamics** and **cohesion techniques** help the individual members of a team develop strong relationships, establish clear roles and expectations, and maintain high levels of communication so that they can work together and function as a unified whole.

4.12 **Pre-competition routines** are sequences of actions and/or thoughts (performed in order) that an athlete follows just prior to an event or competition.

4.13 **Relaxation and energiser techniques** are used to optimise arousal levels prior to performance. They include: **meditation**, **progressive muscle relaxation (PMR)**, **visualisation** and **breathing techniques**.

4.14 Positive self-talk techniques are known to increase feelings of confidence and motivation, optimise arousal and improve concentration. Positive self-talk techniques include: positive cue words, trigger words, positive emotions.

4.15 **Pre-task routines** are actions performed by athletes immediately prior to performing a task (i.e. a closed skill such as a serve, a free kick or a pitch) within a performance.

4.16 **Breathing techniques** include any form of breathing exercise in which an athlete consciously regulates their breathing (by controlling the rate and depth of their breaths) in order to stimulate a desired response (e.g. relaxation and/or focus).

4.17 **Performance segmenting** is the process of breaking up extended periods of training or competition into smaller, more manageable pieces (known as segments).

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PHYSICAL EDUCATION FOR QUEENSLAND UNITS 1 & 2 (SECOND EDITION)
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Dig deeper!

Exam-style revision questions and tasks

Section A

Ten multiple-choice questions

QUESTION 1
The main objective of sport psychology is
(A) to positively affect an opponent's performance.
(B) to increase the chance of optimum performance.
(C) to assist athletes to achieve optimum mental health and improve performance.
(D) to assist athletes to achieve optimum mental health and guarantee optimum performance.

QUESTION 2
Motivation is
(A) a general desire, need or want that drives a person to behave in a particular way.
(B) a belief that a person can have faith in (or rely on) themselves, someone or something.
(C) the level of focus and attentiveness a person dedicates to a task or stimulus.
(D) the relationships between members of a group of people (who are working together to achieve a common goal).

QUESTION 3
Arousal is
(A) a general desire, need or want that drives a person to behave in a particular way.
(B) a belief that a person can have faith in (or rely on) themselves, someone or something.
(C) the level of focus and attentiveness a person dedicates to a task or stimulus.
(D) the relationships between members of a group of people (who are working together to achieve a common goal).

QUESTION 4
Which of the following can be catogorised as types of goals?
(A) Outcome
(B) Performance
(C) Achievement
(D) Process

QUESTION 5
Extrinsic motivation is
(A) a type of motivation driven by internal factors.
(B) a type of motivation driven by external factors.
(C) a type of amotivation.
(D) at the lower end of the motivation continuum.

QUESTION 6
An athlete's overall confidence is made up of
(A) self-confidence, self-belief and self-respect.
(B) self-confidence, self-belief and self-efficacy.
(C) self-belief, self-efficacy and self-esteem.
(D) self-belief, self-efficacy and resilience.

QUESTION 7
Progressive muscle relaxation (PMR) is a popular technique used by athletes to
(A) reduce respiration, core body temperature, perspiration and negative thoughts.
(B) reduce respiration, core body temperature, perspiration and positive thoughts.
(C) reduce respiration, blood pressure, muscle tension and core body temperature.
(D) reduce respiration, blood pressure, muscle tension and negative thoughts.

QUESTION 8
According to Nideffer's Attentional Model, attention exists in two dimensions:
(A) direction and width.
(B) length and width.
(C) intrinsic and extrinsic.
(D) broad and narrow.

QUESTION 9
_____ is the strategy that allows an athlete to maintain concentration and focus by breaking up a performance into manageable sections.
(A) Body movement segmenting
(B) Performance segmenting
(C) Progressive muscle relaxation
(D) Pre-task routines

QUESTION 10
According to Tuckman's Stages of Group Development, group norms should be developed during the _____ stage.
(A) forming
(B) storming
(C) norming
(D) performing

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CHAPTER 4 SPORT PSYCHOLOGY
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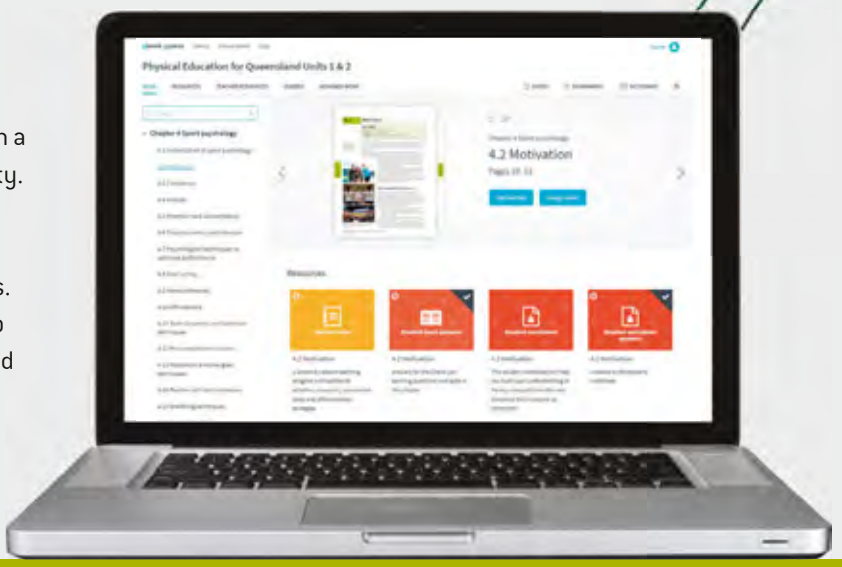


‘It is not the mountain we conquer, but ourselves.’

Sir Edmund Hillary (1919–2008)

New Zealand mountain climber and explorer who, together with the Tibetan mountaineer Tenzing Norgay, was the first person to reach the summit of Mount Everest (8848 metres above sea level)

CHAPTER

4 SPORT PSYCHOLOGY

KEY TERMS

By the end of this chapter, you should understand the meanings of the following key terms. They are defined throughout the chapter, as well as in the glossary. Use this handy checklist to test your understanding.

- ☐ affirmations
- ☐ amotivation
- ☐ anxiety
- ☐ arousal
- ☐ attention
- ☐ autonomy
- ☐ breathing techniques
- ☐ choke
- ☐ cognitive anxiety
- ☐ competence
- ☐ concentration
- ☐ confidence
- ☐ goal setting
- ☐ group norms
- ☐ group roles
- ☐ irrelevant cues
- ☐ meditation
- ☐ mental rehearsal
- ☐ motivation
- ☐ negative self-talk
- ☐ non-self-determined motivation
- ☐ outcome goals
- ☐ over-arousal
- ☐ performance goals
- ☐ performance segmenting
- ☐ positive cue words
- ☐ positive emotions
- ☐ positive self-talk
- ☐ pre-competition routines
- ☐ pre-task routines
- ☐ process goals
- ☐ progressive muscle relaxation (PMR)
- ☐ relaxation and energiser techniques
- ☐ relevant cues
- ☐ self-belief
- ☐ self-confidence
- ☐ self-determination theory
- ☐ self-determined motivation
- ☐ self-efficacy
- ☐ self-talk
- ☐ SMARTER principle
- ☐ social cohesion
- ☐ somatic anxiety
- ☐ sport psychology
- ☐ task cohesion
- ☐ team cohesion
- ☐ team dynamics
- ☐ under-arousal
- ☐ visualisation

SUBJECT MATTER OUTCOMES COVERED IN CHAPTER 4

The following tables list all of the subject matter dot points you are required to cover in **Unit 2 – Topic 1** of the Physical Education General Senior Syllabus. They also show you exactly where that subject matter is covered in this Student book.

Unit 2 – Topic 1: Sport psychology integrated with a selected physical activity

In Unit 2 – Topic 1, students engage in learning that involves the integration of sport psychology subject matter and the subject matter from a selected physical activity.

Stage 1: Engage and understand

Subject matter	Section/s	Page/s
In this area of study, students will:		
→ recognise and explain that sport psychology aims to optimise performance through the application of psychological knowledge and strategies	4.1	192–195
→ recognise and explain the concept of – motivation as a continuum, from extrinsic to intrinsic	4.2	196–199
– confidence, including self-confidence, self-belief and self-efficacy	4.3	200–203
– arousal as a continuum, from relaxed drowsiness, wakefulness, curiosity and attentiveness to joy, exhilaration, anxiety, panic and rage	4.4	204–209
– attention and concentration, including broad, narrow, internal and external foci	4.5	210–213
– team dynamics and cohesion, including group roles, group norms and social support	4.6 4.11	214–217 230–232
→ identify and explore the impact of motivation, confidence, arousal, attention, concentration and team dynamics on personal performance in the selected physical activity	Skill Drill 4.4 Skill Drill 4.6 Skill Drill 4.9 Skill Drill 4.15	342–343 344–345 346–347 348–349
→ investigate information about psychological techniques that can be used to optimise performance – goal-setting techniques – process goals, outcome goals and performance goals	4.8	220–223
– mental rehearsal techniques – mental rehearsal of the entire performance, visualisation of one aspect of skill execution prior to performance, and internal and external perspectives of imagery	4.9	224–227
– positive self-talk techniques – using positive cue words and positive emotions to create self-belief	4.14	240
– self-confidence techniques – identifying how thoughts can affect self-confidence e.g. situation, thoughts, emotions and reactions, using affirmations to change personal reactions to situations	4.10	228–229
– pre-performance techniques – construction of a pre-performance routine and checklist; investigating mental rehearsal and pre-event tasks and cues to prepare for training and competition e.g. technical points, triggers or competition segments	4.12	233–235
– relaxation and energiser techniques – progressive muscle relaxation (PMR), deep breathing techniques, music and visualisation techniques	4.13 4.16	236–239 246
– attention and concentration techniques – selective attention, using trigger words, performance segmenting, pre-performance routines and within-competition routines	4.14 4.15 4.17	240–243 244–245 247
– team dynamics and cohesion techniques – leadership, communication, norms, rules and discipline	4.11	230–232
→ investigate the use of psychological techniques on personal performance in authentic performance environments	Skill Drill 4.4 Skill Drill 4.6 Skill Drill 4.9 Skill Drill 4.15	342–343 344–345 346–347 348–349
→ gather primary data about the influence of psychological techniques on personal performance of specialised movement sequences and movement strategies in authentic performance environments		
→ use secondary data to analyse how the sport psychology concepts and principles can influence performance in the selected physical activity.	Chapter 4	188–251

Stage 2: Apply and analyse

Subject matter	Section/s	Page/s
In this area of study, students will:	Skill Drill 4.4 Skill Drill 4.6 Skill Drill 4.9 Skill Drill 4.15	342–343 344–345 346–347 348–349
→ analyse and synthesise primary data and secondary data about the influence of sport psychology concepts and principles on specialised movement sequences and movement strategies in the selected physical activity		
→ optimise performance in the selected physical activity by devising personal and team sport psychology strategies that consider the influence of sports psychology concepts and principles on specialised movement sequences and movement strategies – effect of the psychological techniques on personal and team motivation, confidence, arousal, attention, concentration and/or team dynamics – factors affecting the implementation of the techniques		
→ implement the sport psychology strategies and movement strategies to gather primary data about the outcomes, implications and limitations of decisions		
→ analyse primary data and secondary data to ascertain relationships between the sport psychology and movement strategies, concepts and principles, and personal performance.		

Stage 3: Evaluate and justify

Subject matter	Section/s	Page/s
In this area of study, students will:	Skill Drill 4.4 Skill Drill 4.6 Skill Drill 4.9 Skill Drill 4.15 Chapter 4 review – Practice assessment task	342–343 344–345 346–347 348–349 248–251
→ reflect on primary data and secondary data to evaluate the effectiveness of sport psychology and movement strategies to achieve a determined outcome including – meeting the requirements of personal and team performance in the selected physical activity – using suitable sport psychology techniques to optimise personal and team motivation, confidence, arousal, attention, concentration and/or team dynamics – optimising the performance of specialised movement sequences and movement strategies		
→ make decisions to maintain or modify the sport psychology strategies and movement strategies		
→ justify the development of sport psychology and movement strategies using evidence from primary data and secondary data		
→ justify maintenance or modification of the sport psychology and movement strategies using evidence from primary data and secondary data		
→ make decisions about and use language, conventions and mode-appropriate features to convey meaning for particular purposes and contexts.		

Check your obook assess for the following additional resources and more:

- **» Chapter glossary**
  Learn key terms from Chapter 4
- **» Flashcard glossary**
  A digital interactive to help you test your knowledge of key terms
- **» Weblink**
  QCAA Physical Education General Senior Syllabus

4.1 Introduction to sport psychology

That's a goal!

By the end of Section 4.1, you should be able to:

→ **define** the term 'sport psychology'

→ **explain** how sport psychology aims to optimise the performance of athletes

→ **identify** five concepts that are central to sport psychology.

Defining sport psychology

sport psychology
a field of science that investigates how an athlete's mental processes (e.g. their thoughts and emotions) influence their participation and performance in sport and physical activity; the discipline of sport psychology aims to assist athletes to achieve optimum mental health and to improve performance

choke
(in sport) a term used to describe the failure of an athlete or team to perform to their full potential (e.g. freezing under pressure or making unnecessary errors due to nerves)

Sport psychology is a field of science that investigates how an athlete's mental processes – such as their thoughts, feelings and emotions – influence their participation and performance in sport and physical activity. The discipline of sport psychology aims to assist athletes to achieve optimum mental health and improve performance.

Early attempts at applying psychological theories in the sporting world began in the late 1800s, but it wasn't until the late 1900s that the field of sport psychology became accepted in its own right. Today, most professional athletes consult with sport psychologists on a wide range of issues, such as how to deal with pressure or overcome anxiety.

When training for any sport or physical activity, the best programs ensure an athlete is both physically and mentally ready to perform at their best. In sporting history, countless athletes in peak physical condition have been known to **choke** under pressure or fail to perform at their best during competition (see Source 1), because they did not have the necessary psychological knowledge, skills and techniques to help them deal with a range of situations. In fact, when competing athletes are matched in terms of their physical fitness and ability, the difference between the winner and the loser often comes down to their mental strength.

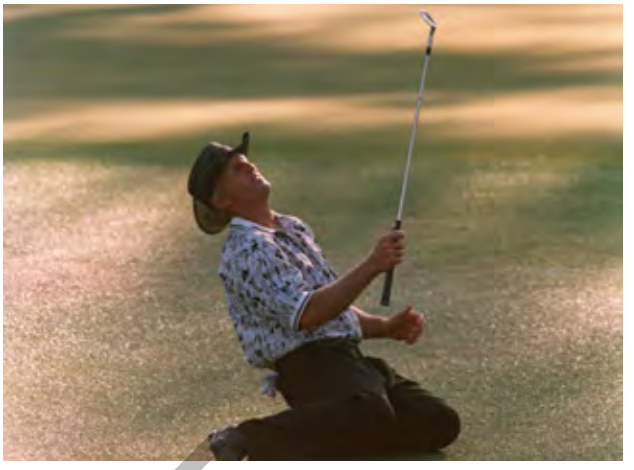
SOURCE 1 The intense pressure of competition can cause athletes to choke, even when they are at peak physical fitness. Nick Kygios is well known for taking out his frustrations on his racquet.

Theory in action | Greg Norman's 1996 US Masters meltdown

Greg Norman is an Australian golfing legend. During his career, he enjoyed 91 professional victories internationally and spent a total of 331 weeks ranked at world number one. Norman won two major tournaments and was runner-up eight times.

Ask your parents about Greg Norman and they will probably be familiar with his nickname: 'the Great White Shark'. They might also remember that Norman was involved in one of the most famous chokes in sporting history. It took place at the 1996 US Masters Tournament – the most prestigious event on the golfing calendar. Norman started out in near perfect form and by the final day, he had set up an almost unbeatable lead of six shots.

However, on the final day of competition, rival golfer Nick Faldo was '**in the zone**', playing the best round of the day at five under par. After the 7th hole, Norman's performance took a sudden turn for the worse. With each hole, his nerves began to get the better of him and his lead was whittled away. Norman was definitely not 'in the zone' – by the 18th hole, not only had he lost the tournament; he had lost it by five shots!



SOURCE 2 Greg Norman's performance at the 1996 US Masters will go down as one of the greatest chokes in the history of sport.

In a press conference afterwards, Norman admitted that the only thing he could do at the end of the day was walk down to the beach to sit, cry and ponder how it all went wrong. A video of the incident is provided on your obook assess.

Key concepts in sport psychology

There are many different concepts used in sport psychology to help athletes build mental strength, reduce the risk of failing to perform, and optimise performance. Some of the most important psychological concepts include:

- **motivation** – a general desire, need or want that drives a person to behave in a particular way
- **confidence** – the belief that a person can have faith in (or rely on) themselves, someone or something
- **arousal** – a feeling of mental and physical alertness or excitement
- **attention and concentration** – the level of focus and attentiveness a person dedicates to a task or stimulus
- **team dynamics and cohesion** – the relationships between members of a group of people (who are working together to achieve a common goal) and the degree to which they can stick together as a united whole.

in the zone
(in sport) a term used to describe a state of focused concentration that allows an athlete or team to perform at the peak of their physical and mental ability

Each of these concepts will be explored in detail in this chapter. They are central to the study of sport psychology because – regardless of the stage of learning an individual athlete (i.e. from beginner through to expert) – a thorough understanding of these concepts will help every athlete maximise their potential and optimise their performance.

Most athletes already have a basic understanding of the importance of these psychological concepts, but it is important to be aware that levels of motivation, confidence,

FOR THE RECORD!

Many professional athletes and elite sporting teams now employ sport psychologists. Sport psychologists may travel with an individual or team to offer advice and support during training and competition, and even during downtime. According to payscale.com, top sport psychologists working with an elite athlete can expect to earn in excess of $100 000 per year.

SOURCE 3 Sally Pearson was 'in the zone' when she won gold in the women's 100 metres hurdles at the London 2012 Olympic Games.

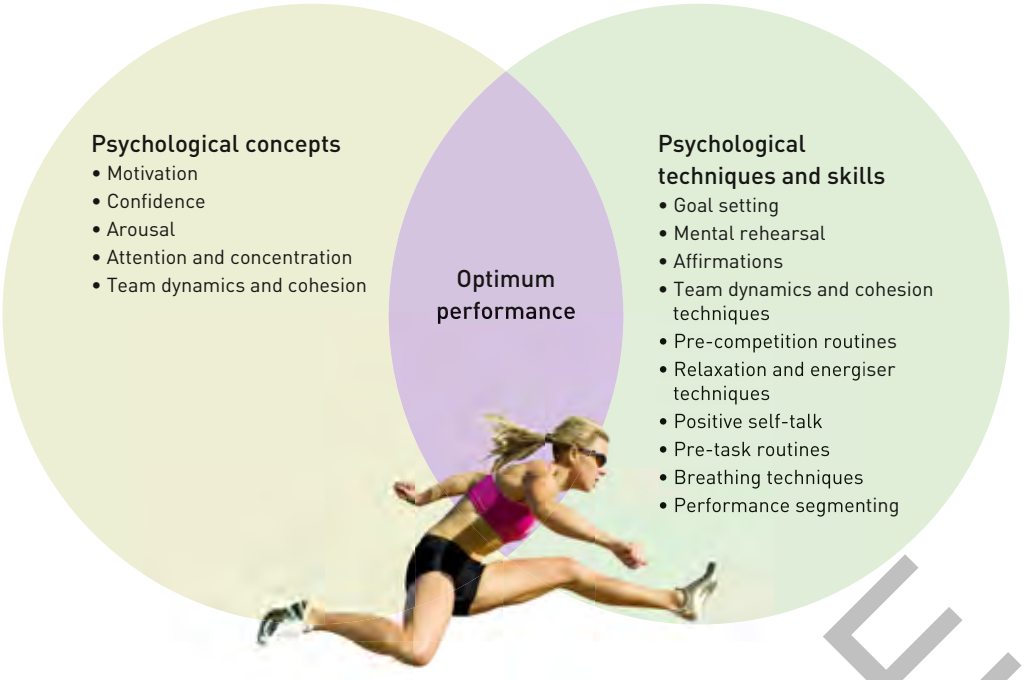
arousal, attention and concentration within athletes do not remain constant. Instead, the levels of each of these characteristics can vary widely on a monthly, weekly, daily or even hourly basis due to a range of factors.

For example, an athlete's confidence levels may be high at the start of the week, but may decrease as the week progresses. That same athlete's motivation and concentration might also reduce as a result. It is therefore important for athletes to constantly evaluate their mental state during training and competition so that they can take the necessary steps to get into the right 'zone'. When all of these characteristics are at their optimum levels, an athlete can enter a state of focused concentration that allows them to perform at the peak of their physical and mental ability. This state is often referred to as being 'in the zone'. This optimum zone is different for every athlete – for example, some athletes perform best when they are hyped up during competition, while others perform best in a more relaxed state.

Key techniques in sport psychology

In order to optimise the psychological concepts mentioned, there are a number of practical psychological techniques that athletes can apply at any stage during training and competition. These are listed in Source 4 and will be discussed in detail later in this chapter. Research has shown that these sport psychology techniques can assist athletes to:

- enhance their performance
- cope with the pressures of competition
- recover from injuries
- stay motivated and keep up with a training program
- get more enjoyment out of their chosen sport or physical activity.



SOURCE 4 Athletes can apply different psychological concepts, techniques and skills to optimise their performance. Psychological concepts are discussed in Sections 4.2–4.6 of this chapter, and psychological techniques and skills are discussed in Sections 4.7–4.17.

STUDY TIP

Diagrams and flowcharts are great tools to enhance your understanding of a concept. If you're struggling to grasp a particular idea, try creating your own diagram to explain it. Alternatively, you could redraw a diagram in your own style and add in extra details. It can also help to have a go at explaining a concept diagram to a friend.

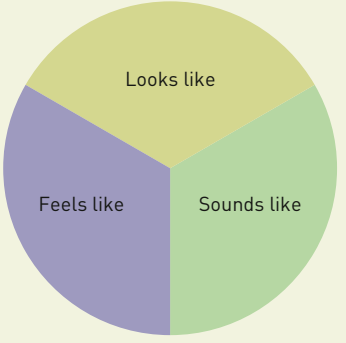
4.1 Check your learning

Engage and understand

1 In your own words, **summarise** the term 'sport psychology'.
2 **Describe** some of the benefits and advantages that sport psychology can offer athletes.
3 **Explain** what is meant by the term 'in the zone'.
4 **Identify** five key concepts that underpin sport psychology. **Define** each one briefly in your own words.

Analyse and apply

5 Copy the Y-chart provided into your notebook and use it to help you **describe** two situations (either during training or competition) when you:
   a were 'in the zone'
   b choked under pressure.
   Compare the sights, sounds and feelings of each situation and **determine** the impact they had on your performance in your sport.



Evaluate and justify

6 Read 'Greg Norman's 1996 US Masters meltdown'. It states that Nick Faldo was 'in the zone' on the final day of play and had the best round of the tournament. **Assess** the effect that Faldo's strong performance may have had on Greg Norman's poor performance that day.

Check your obook assess for the following additional resources and more:

- **» Student book questions**
  4.1 Check your learning
- **» Student worksheet**
  4.1 Introduction to sport psychology worksheet
- **» Video weblink**
  Greg Norman's 1996 US Masters meltdown
- **» Weblink**
  Introduction to sports psychology

4.2 Motivation

That's a goal!

By the end of Section 4.2, you should be able to:

→ **define** the concept of motivation

→ **identify** two main types of motivation (i.e. extrinsic and intrinsic)

→ **explain** the role that motivation plays in optimising the performance of athletes.

motivation
a desire, need or want that causes a person to behave in a particular way

Motivation is a key concept in sport psychology. It refers to the drive within us to behave in a particular way to achieve our goals. Most people would agree that any athlete who wants to succeed in their chosen sport will need high levels of motivation – but what does that actually mean?

SOURCE 1 Athletes are motivated by many different things including: medals or prize money, belonging to a team or cheering fans.

Different things motivate people at different times and to different extents. For example, one athlete might be motivated by awards (such as trophies and prize money), another might be motivated by the thrill of participating in sport, while another might be motivated by the roar of the crowd. Some athletes might be motivated by all of these things at the same time. In fact, there are many variables that can influence the motivation levels of an individual athlete on any given day.

Often, a coach's emphasis is solely on increasing the quantity of motivation – the assumption being that higher motivation will lead to better performance. However, research has shown that the quality of motivation, rather than the quantity, is a greater predictor of sporting success.

Self-determination theory

Unlike many theoretical frameworks of motivation, **self-determination theory (SDT)** makes the distinction between the quality and quantity of motivation. SDT was developed in 1985 by US psychologists Edward Deci and Richard Ryan. It is a theoretical framework used to analyse human behaviour and is very useful for understanding what motivates people to participate in sport and physical activity in the ways they do. The central argument of SDT is that all human beings are born with three basic psychological needs:

- **autonomy** – a person's need to control their own life and make their own decisions
- **competence** – a person's need to learn and master skills that challenge their abilities
- **relatedness** – a person's need to feel a sense of belonging by interacting with others and feeling part of a group or community.

When an athlete feels in control of their behaviour (autonomy), experiences success (competence), and feels accepted and valued by their coach and teammates (relatedness), they will demonstrate a more positive mindset during training and display a healthier psychological state. How well these psychological needs are met in an athlete has an impact on the quality of motivation they experience.

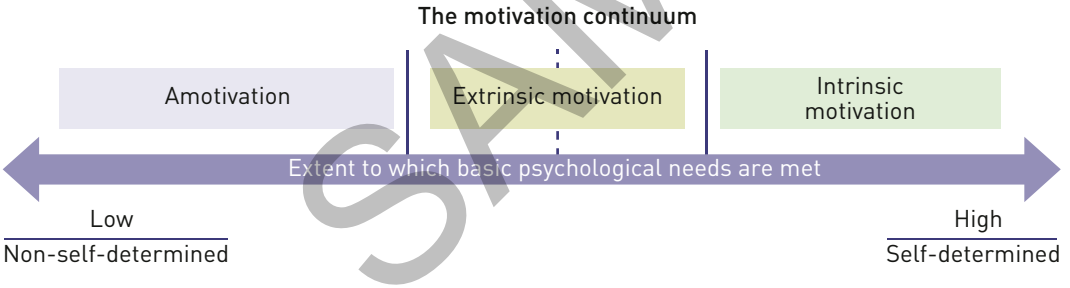
SDT suggests that there are three main types of motivation that exist along a continuum:

- **amotivation** – the absence of motivation
- **extrinsic motivation** – a type of motivation driven by external factors (i.e. factors that come from outside a person)
- **intrinsic motivation** – a type of motivation driven by internal factors (i.e. factors that come from inside a person).

The motivation continuum

As shown in Source 2, SDT defines motivation in terms of a continuum from amotivation (on the left), through extrinsic motivation to intrinsic motivation (on the right). The continuum moves from **non-self-determined motivation** to more **self-determined motivation**. If a person's basic needs for autonomy, competence and relatedness are not being met at all, there will be a complete absence of motivation (referred to as 'amotivation'). As these needs are increasingly met, levels of motivation become more self-determined.

A thorough understanding of SDT can be beneficial for coaches and training staff, as it is often their responsibility to help optimise the motivation levels of the athletes they are working with. The more self-determined an athlete's motivation, the more beneficial it is for their performance and their psychological wellbeing. We will now look at intrinsic and extrinsic motivation in more depth.



SOURCE 2 Self-determination theory explains motivation in relation to three basic needs and places it on a continuum from amotivation (i.e. non-existent), through to extrinsic motivation (i.e. medium) and intrinsic motivation (i.e. high), based on the degree of self-determination an individual feels.

Extrinsic motivation

Extrinsic motivation is a type of motivation that is driven by external factors. In other words, when a person is extrinsically motivated to perform a task, they value the likely outcome more than the task itself. In a sport setting, extrinsic motivations can include things like:

- awards, trophies and prize money
- praise and recognition from friends, family, teachers or the public (i.e. spectators or fans)
- pressure or threats from friends, family or teachers
- a desire to be popular or make friends
- a desire to lose weight or build muscle.

self-determination theory
a theoretical framework used to analyse human behaviour and explain what motivates people

autonomy
a person's need to control their own life and make their own decisions

competence
a person's need to learn and master skills that challenge their abilities

relatedness
a person's need to feel a sense of belonging by interacting with others and feeling part of a group or community

amotivation
the total absence of motivation

extrinsic motivation
a type of motivation driven by external factors (i.e. factors that come from outside a person) such as money and fame

intrinsic motivation
a type of motivation driven by internal factors (i.e. factors that come from inside a person) such as fun and personal satisfaction

non-self-determined motivation
a type of motivation that is not controlled by the individual

self-determined motivation
a type of motivation that is controlled by the individual

Types of extrinsic motivation

Not all forms of extrinsic motivation are the same. According to the SDT, they vary in type depending on the amount of control a person has over the activity they are performing (i.e. the degree of autonomy they have).

Extrinsic motivation can be categorised generally into two groups:

- externally controlled
- internalised and integrated.

SOURCE 3 Praise from spectators is an example of an externally controlled extrinsic motivator.

When an athlete is given very little choice about what to do (i.e. low autonomy), they are motivated purely by an external demand and its associated reward – their extrinsic motivation is externally controlled. An example of this is an athlete going for a run because their coach has threatened them with bench time if they don't improve their fitness. Externally controlled motivation is low in self-determination and therefore sits to the left of the motivation continuum (see Source 2).

By contrast, when an athlete enjoys more choice about what to do (i.e. high autonomy), there is an alignment between the task they are performing, its associated reward, and their personal values. In this case, the reward comes from outside the athlete, so the motivation is still extrinsic. It seems to come from within because the reward and the values associated with it have been internalised by the athlete and integrated into their sense of who they are and what is important to them. An example of this is a runner who goes for a run because they value fitness and appearance and running helps them to meet their own goals for weight loss and improved fitness. Although more self-determined than the earlier example of the athlete who runs in response to the threat of bench time, the motivating factor in this instance is still extrinsic because it comes from an external, societal-based source.

In this way, there are different types of extrinsic motivation that sit at different points along the motivation continuum based on how self-determined they are. However, the consistent feature in each case is that the motivating factor is external to the individual.

Extrinsic motivation can be a very strong motivator, especially for young athletes or people who are new to a sport. For some athletes, praise and recognition can serve as strong encouragement for them to keep trying and not to give up. Nevertheless, there are limits to the effectiveness of praise and recognition over the longer term. It is important that externally regulated motivation is complemented by more self-determined forms of motivation for the athlete to experience longevity in participation and to find strength and motivation during challenging times in the sporting journey.

SOURCE 4 A combination of intrinstic and extrinsic motivation results in optimum performance.

Intrinsic motivation

Intrinsic motivation is a type of motivation that is driven completely by internal factors. For example, an athlete who goes for a run purely because they love the feeling of running is said to be intrinsically motivated. In a sport setting, intrinsic motivations can include things like:

- feelings of fun, pleasure and excitement
- the enjoyment of taking on a challenge
- a personal desire to learn new skills and experience new things.

Athletes who are intrinsically motivated tend to achieve much better long-term results and stay active in their chosen sport for longer periods of time. Athletes who have a strong sense of autonomy, competence and relatedness are more likely to experience intrinsic motivation. They

become their own motivator in difficult times (e.g. when they are under pressure) and continue to perform well in the absence of extrinsic motivators. However, studies have shown that athletes who are predominantly intrinsically motivated tend to lack the strong competitive drive needed to be a champion. They enjoy mastering tasks in their chosen sport, but are less concerned about pushing themselves in order to compete against others and win.

FOR THE RECORD!

Many people assume that elite athletes possess high levels of intrinsic motivation but that's not always the case – for example, Australian tennis player Bernard Tomic shocked the tennis world with his admission that he was 'bored' and struggling to find motivation during the 2017 Wimbledon Championships.

Achieving and maintaining optimum motivation

Sport psychologists generally agree that a combination of both intrinsic and extrinsic motivation results in optimum performance. This combination of intrinsic and extrinsic factors leads to desirable characteristics such as:

- persistence and perseverance
- a positive attitude
- enduring focus and concentration.

These characteristics can help athletes achieve long-term success and enjoyment in their chosen sport.

4.2 Check your learning

Engage and understand

1 In your own words, **define** extrinsic motivation and intrinsic motivation. **Explain** the main difference between them.

2 **Summarise** the self-determination theory. Make reference to the three basic psychological needs that must be met for an individual to experience intrinsic motivation.

Analyse and apply

3 **Categorise** the following examples as either 'controlled extrinsic motivation' or 'internalised and integrated motivation'.

- **a** Pushing through the pain of the last kilometre of a 5 km run because this will help you win the cross country trophy.
- **b** Joining a local lawn bowls club because you love playing the sport.
- **c** Getting up at 5 am to swim 30 laps of the town pool to stay fit and healthy.
- **d** Trying your hardest to win at the local archery tournament because your dad was a champion archer and is so excited to see you compete.

Evaluate and justify

4 **Evaluate** the following statement about self-determination theory. 'Athletes need to have high levels of autonomy, competence and relatedness to become optimally motivated'.

5 Refer to the motivation continuum (Source 2 page 197) and **decide** where you currently sit. Use primary and secondary data to justify your decision.

- **a** **Develop** and record one or two practical strategies that could help you move along the continuum towards the right (i.e. towards intrinsic motivation)
- **b** Each week over the course of Unit 2, revisit your strategies and **assess** if they are helping you to develop intrinsic motivation. Provide evidence (e.g. primary data) to support your response.

6 **Evaluate** the types of motivation you have experienced in sport throughout your life. Provide an example of a time you:

- **a** were amotivated
- **b** had externally controlled motivation
- **c** had internalised and integrated motivation
- **d** had intrinsic motivation.

7 **Examine** whether children should be given extrinsic rewards for participating in sport. Use the table below to help generate discussion points in your response.

Reasons for extrinsic rewards	Reasons against extrinsic rewards
1 2	1 2

Check your obook assess for the following additional resources and more:

- **» Student book questions** 4.2 Check your learning
- **» Video** Self-determination theory
- **» Student worksheet** 4.2 Motivation worksheet
- **» Weblink** Extrinsic versus intrinsic motivation

4.3 Confidence

That's a goal!

By the end of Section 4.3, you should be able to:

→ **define** the concept of confidence

→ **identify** three key factors that contribute to overall confidence (i.e. self-confidence, self-belief and self-efficacy)

→ **explain** the role that confidence plays in optimising the performance of athletes.

confidence
the belief that an individual can have faith in (or rely on) themselves, someone or something

Confidence is another key concept in sport psychology. In simple terms, confidence is the belief that a person can have faith in (or rely on) themselves, someone or something.

Confidence plays an important role in every athlete's overall performance. In fact, confidence underpins most of the other psychological characteristics demonstrated by successful athletes because it is critical to building mental strength. Take, for example, the following two athletes:

- a tennis player who is making repeated unforced errors on court during an important match and starts visibly slumping between points
- a soccer player who has to kick for goal to win the match in a penalty shoot out.

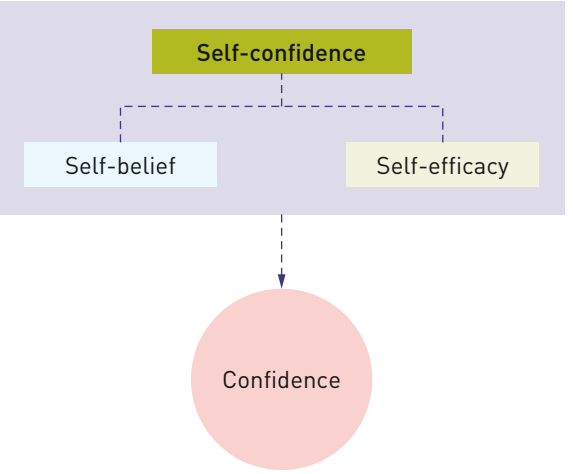
In both cases, each athlete's future performance will be strongly influenced by the degree of confidence they have in their ability to perform at the level required. For this reason, understanding confidence – and developing an appreciation of the role it plays in overall performance in different situations – is an important part of sport psychology.

SOURCE 1 Confidence contributed to the extraordinary success of the Matildas, who rose to be ranked fourth in the world in 2017 – their best result ever.

Sport psychologists often describe an athlete's overall confidence in terms of three factors. These include:

- **self-confidence**
- **self-belief**
- **self-efficacy**.

The relationship between these three factors – and the role that each one plays in an athlete's overall confidence – can be complex. Sometimes these terms are used interchangeably, while at other times they have a particular meaning. We will now explore each factor in more detail.



SOURCE 2 Self-belief and self-efficacy are components of self-confidence. All three factors combined determine an athlete's confidence.

Self-confidence

Self-confidence is a general term used to describe a feeling of trust in one's own abilities, qualities and judgments. In a sporting context, self-confidence is often defined as the acceptance and conviction that an athlete has the resources (i.e. the skills and abilities) to achieve success and win.

Self-confident athletes are composed, thrive on pressure, challenge themselves and rarely doubt their ability to perform at their best. By contrast, athletes who lack self-confidence hesitate more, persist less, doubt their ability to perform at their best, and make more errors.

Self-belief

Self-belief is another general term used to describe the overall trust an athlete has in their ability to succeed, regardless of their previous achievements and competencies. Self-belief can therefore be understood as one component or ingredient of self-confidence. Australian tennis star Lleyton Hewitt is a good example of an athlete with a very high level of self-belief. With his 'never give up' attitude, Hewitt was famous for coming back from the edge of defeat to grasp victory.

SOURCE 3 During his career, Australian professional tennis player and former world number 1 Lleyton Hewitt drew on reserves of self-belief when he needed it most.

self-confidence
an athlete's conviction that they have the skills and abilities to succeed

self-belief
an athlete's trust in their ability to succeed, regardless of their previous achievements and competencies

self-efficacy
an athlete's belief in their ability to perform a particular task

Theory in action | Appearing confident versus being confident

The lead up to any world-class boxing match provides a fascinating spectacle. Pre-bout hype can involve weigh-ins, intense press conferences and theatrical face offs. Boxers typically use these opportunities for showmanship, displaying extreme levels of confidence that are designed to intimidate their opponent. It also helps them to prepare psychologically to perform.

Muhammad Ali believed his words were his cannons. He defended his incessant pre-match trash talking by exclaiming: 'It ain't bragging if you can back it up.' It could be said that his self-efficacy and his capabilities matched. At just 22 years of age, Ali came up against Sonny 'Big Bear' Liston – an imposing figure with a criminal record. On the eve of the fight, Ali announced that he would use Liston's body as a bear rug in his home! He went on to win the fight and claim his place in the history books. Researchers at Florida State University have found that trash talking can improve performance by as much as 46%. It boosts self-confidence and the belief that your opponent is weaker because of it.

SOURCE 4 'Fake it till you make it' is a common saying regularly used by boxers. The idea being that if they proclaim their greatness enough, both they and their opponent will have no choice but to believe it.

Self-efficacy

Self-efficacy is a specific term used by sport psychologists to describe an athlete's confidence. It refers to the belief an athlete has in their ability to perform a particular task. In other words, the level of self-efficacy an athlete has when completing in a specific activity is a measure of the perception they have of their ability to successfully meet the demands of that particular task. This means that an athlete might have high self-efficacy in cricket and low self-efficacy in badminton. It may also mean that a cricketer has high self-efficacy in bowling, but low self-efficacy in batting.

The concept of self-efficacy was developed by US psychologist Albert Bandura. He saw self-efficacy as an indicator of self-confidence. While self-confidence is a general, slightly 'fuzzy' term, self-efficacy is a more specific and more useful term for sport psychologists to use when helping to improve the performance of athletes.

It is important to recognise that self-efficacy refers to an athlete's *perception* of their ability in a given task, rather than their *actual* ability. This distinction between self-efficacy and true capability is crucial in situations where an athlete's level of self-efficacy in a task leads them to be over- or under-confident about their prospects. Mismatches of self-efficacy and true capability in either direction can have a negative impact on an athlete's performance. Losing a match due to underestimating an opponent is one example of how self-efficacy can impact an athlete's performance in this way.

4.3 Check your learning

Engage and understand

1 In your own words, **define** the term 'confidence' in the context of sport.

2 **Identify** and list some of the key characteristics that distinguish a self-confident athlete from one who lacks self-confidence.

Analyse and apply

3 Read 'Appearing confident versus being confident'. **Analyse** how having a 'fake it till you make it' attitude can contribute to a successful performance.

4 **Reflect on** situations in sport when your self-efficacy did not match your true capability. Determine how this affected your self-confidence.

Evaluate and justify

5 **Create** your own diagram, flowchart or table to explain the interrelationship between self-confidence, self-belief and self-efficacy. You may like to expand or modify Source 2 to do this.

6 **Justify** a response that supports or refutes the following statement: 'Appearing confident is just as important as being confident.' Use Source 4 to help develop arguments for your response.

7 **Conduct** some online research to compile a list of three strategies that an athlete could use to overcome low self-efficacy. **Justify** your selection of strategies using primary and/or secondary data.

Check your obook assess for the following additional resources and more:

- **Student book questions** 4.3 Check your learning
- **Student worksheet** 4.3 Confidence worksheet
- **Video weblink** Building self-belief
- **Weblink** The importance of confidence in sport

4.4 Arousal

That's a goal!

By the end of Section 4.4, you should be able to:

→ **define** the concept of arousal

→ **identify** key stages on the arousal continuum (i.e. from relaxed drowsiness through to panic and rage)

→ **explain** the role that arousal plays in optimising the performance of athletes.

arousal
a feeling of mental and physical alertness or excitement

fight or flight response
an innate (i.e. instinctive) physiological response to a threat of danger or harm that prepares the body to defend or flee

Arousal is another key concept in sport psychology. In simple terms, arousal is a feeling of mental and physical alertness or excitement.

Arousal is linked to our body's **fight or flight response**, an instinctive reaction that all human beings have when they are faced with the threat of danger or harm. During the fight or flight response, the body prepares to fight or flee danger by undergoing a range of physiological changes (such as increased heart rate, more rapid breathing, increased perspiration and increased brain activity). Blood is diverted away from the abdominal organs and the skin, towards muscles in the arms and legs that are necessary to defend the body or propel it away from danger.

SOURCE 1 The arousal levels athletes experience when they are training or competing simulate the body's fight or flight response.

STUDY TIP

Throughout this unit, keep track of your arousal levels during training and competition by recording:

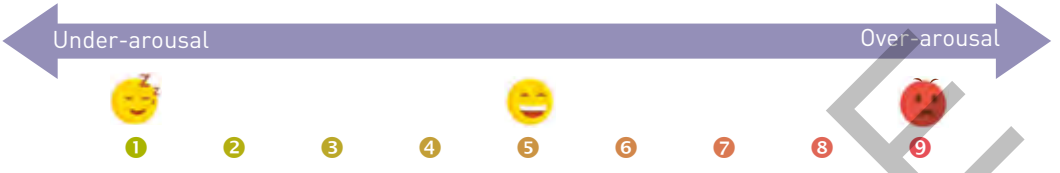
- dates and times of physical activity
- playing conditions (e.g. weather)
- position played
- your arousal levels before and during activity
- your rating on the arousal continuum (before and during activity).

Reflect on the interrelationship between these factors and how they affected your performance on the day.

When an athlete is preparing for, or competing in, an important event, their arousal levels simulate a fight or flight response. Throughout training, pre-performance and performance, athletes need to ensure that their mind and body are in an optimum state of arousal. Whether a boxer is in training for a title fight, a gymnast is about to take the floor for their final routine, or a swimmer is on the final lap of an 800 metre freestyle race, their arousal levels will need to be optimally controlled and matched to suit their performance needs.

The arousal continuum

Similar to motivation, arousal is often defined in terms of a continuum. As shown in Source 2, athletes performing at the lower end of the continuum are often described as being under-aroused, whereas athletes performing at the higher end of the continuum are said to be over-aroused.



1	**relaxed drowsiness**	a state of low arousal, low stress and low awareness
2	**wakefulness**	a state of consciousness and awareness
3	**curiosity**	a state of desire to know or learn
4	**attentiveness**	a state of paying close attention to detail
5	**joy**	a state of pleasure and happiness
6	**exhilaration**	a state of excitement, extreme happiness or elation
7	**anxiety**	a state of nervousness and worry
8	**panic**	a state of sudden uncontrollable fear or extreme anxiety
9	**rage**	a state of violent uncontrolled anger or aggression

SOURCE 2 The arousal continuum organises common states on a scale from under-arousal to over-arousal.

The arousal continuum is a useful tool to help understand the impact that different arousal levels can have on performance. Generally speaking, optimum arousal levels for most athletes and physical activities are located towards the middle of the continuum. However, this is not always the case.

In a state of optimum arousal, athletes will be both mentally and physically prepared for the type of activity and situation they are facing. It is therefore more helpful to think of optimum arousal levels in relation to individual athletes and the different tasks that they are required to perform. To illustrate this point, let's compare an archer with a discus thrower.

- The optimum level of arousal for an archer is probably not a state of joy or exhilaration. In fact, these are both likely to be considered states of over-arousal because archers try to slow their heart rate and release arrows between heart beats in order to improve aim and reduce extraneous (i.e. unnecessary) movement.
- The optimum level of arousal for a discus thrower is not likely to be a state of joy or exhilaration either. Instead, they will probably produce their best throw when they reach a level of arousal that exceeds these states. An experienced discus thrower who is 'pumped' (i.e. in a state approaching rage) is likely to channel this arousal into activating their muscles and increasing the distance of their throw.

All athletes need to be conscious of their arousal levels and manage them appropriately in order to maintain optimum levels for their situation. When athletes fail to do this, they risk entering states of **under-arousal** or **over-arousal**, both of which will prevent them from performing at their best.

under-arousal
a state of arousal generally considered too low for optimum performance

over-arousal
a state of arousal generally considered too high for optimum performance

anxiety
psychological and physical symptoms brought on by a sense of apprehension about something

cognitive anxiety
anxiety felt as an emotional response

somatic anxiety
anxiety felt as a physical response

SOURCE 3 Serena Williams' state of over-arousal during the 2018 US Open final cost her the match; this followed a similar incident at the 2009 US Open semi-final.

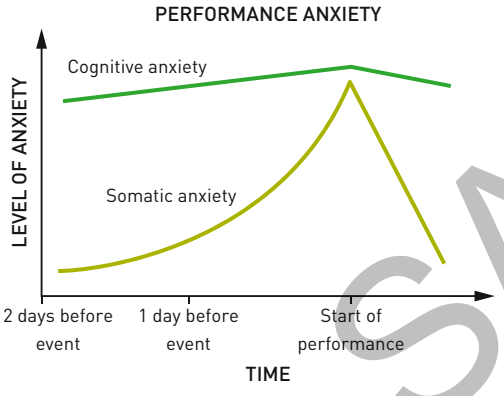
Understanding anxiety

Anxiety is one of the most common forms of over-arousal. Even the most experienced and talented athletes can struggle to manage anxiety. Anxiety is made up of two components:

- **cognitive anxiety** – the emotional and mental responses to over-arousal, such as feelings of worry and panic
- **somatic anxiety** – the physical responses to over-arousal, such as sweaty palms and shallow, rapid breathing (known as hyperventilation).

As Source 4 shows, in the lead-up to a performance, cognitive anxiety is initially much higher than somatic anxiety, as worrying thoughts occupy the mind of an athlete. However, somatic anxiety increases as the event gets closer, causing a physiological response.

Anxiety can cause athletes to feel threatened, seize up, be unable to think clearly and underperform. In such cases, it is important that athletes are able to adopt relaxation techniques in order to manage the anxiety they are experiencing. These are discussed in Section 4.13.



SOURCE 4 In the lead-up to a performance, cognitive anxiety is initially much higher than somatic anxiety, as worrying thoughts occupy the mind of an athlete. However, somatic anxiety increases as the event gets closer, causing a physiological response.

Trait and state anxiety

It is also common to distinguish between two types of anxiety:

trait anxiety
personality-based anxiety

state anxiety
situation-based anxiety

- **trait anxiety** – an athlete's natural tendency (i.e. a personality trait) to perceive something as threatening or non-threatening. Those with high levels of trait anxiety will naturally perceive a situation to be more threatening than a person with low levels of trait anxiety
- **state anxiety** – anxiety that is induced by a particular situation or environment. The emotional response they feel is a direct result of the event or experience they are having. The higher the pressure of the situation, the greater the state anxiety experienced. An athlete's level of state anxiety is often related to their self-confidence.

The interrelationship between trait and state anxiety will determine a person's anxiety levels from moment to moment. For example, it is common for athletes to feel nervous when playing an important match (state anxiety); however, the level of this anxiety is also influenced by their personality (trait anxiety).

The two most important factors that determine an athlete's level of anxiety are:

- the importance of the situation to the individual
- the uncertainty of the outcome of the situation.

STUDY TIP

The level of an individual's trait and state anxiety can be measured using questionnaires. You can find one of these questionnaires on your obook assess. Download and complete the questionnaire to get a better understanding of your personal anxiety levels.

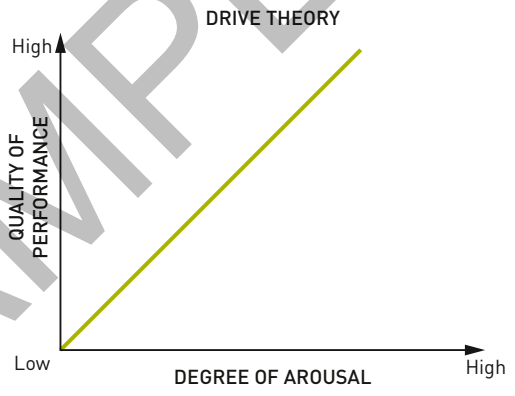
Achieving and maintaining optimum arousal

Sport psychologists generally agree that achieving and maintaining a level of arousal that is right for the individual athlete and their situation will result in optimum performance. However, there are so many differences in athletes' arousal levels that determining the optimum level for every individual is almost impossible. Over the last century, a number of theories have been developed that try to explain the relationship between arousal and performance. We will now examine four of the most common theories. These include:

- Drive Theory
- Inverted U Theory
- Zones of Optimal Functioning Theory
- the Catastrophe Model.

Drive Theory

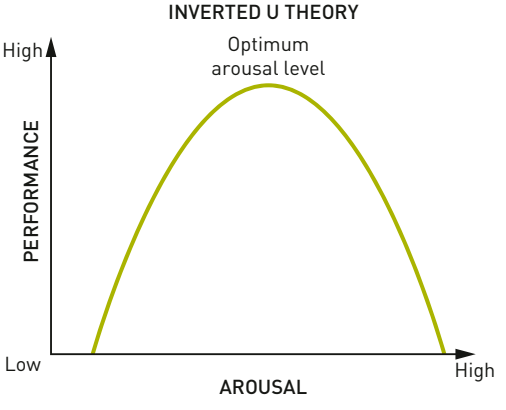
Drive Theory was first developed in 1943 by US psychologist Clark Hull. It proposed that there is a linear relationship between the quality of performance and the degree of arousal. As you can see in Source 5, according to Drive Theory, if an athlete's level of arousal is low, the quality of their performance will also be low. As the athlete's arousal level increases, so too does the quality of their performance.



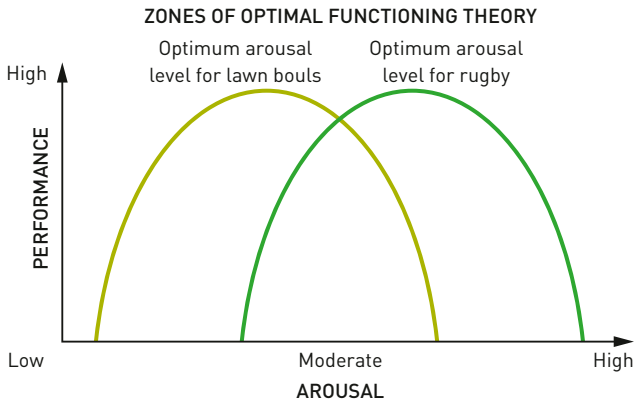
SOURCE 5 According to Drive Theory, the relationship between performance and arousal is a linear one.

Inverted U Theory

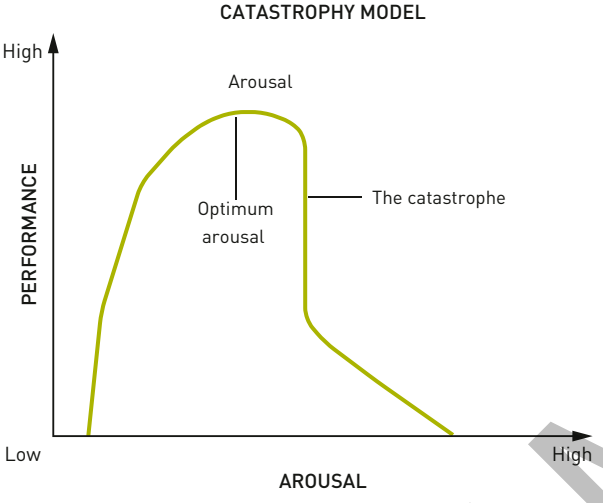
Inverted U Theory was originally proposed in 1908 by US psychologists Robert Yerkes and John Dodson. It suggests that performance increases as a result of mental and physical arousal, but only up to a certain point. Unlike Drive Theory, Inverted U Theory suggests that if levels of arousal become too high, performance actually decreases. As shown in Source 6, the relationship between performance and arousal is often presented as an inverted u-shaped curve, which increases and then decreases in response to rising levels of arousal.



SOURCE 6 According to Inverted U Theory, an increase in arousal causes improvement in performance up to an optimum point. After this point, increased arousal leads to a decline in performance.



SOURCE 7 According to Zones of Optimal Functioning Theory, the zone of optimum arousal differs for different activities.



SOURCE 8 According to the Catastrophe Model, when an athlete experiences both cognitive and somatic anxiety, they can experience a sudden decline in performance.

Zones of Optimal Functioning Theory

Zones of Optimal Functioning Theory was proposed by Russian sport psychologist Yuri Hanin in 1980. Like Inverted U Theory, it suggests that a narrow range (or zone) of arousal levels will produce the best performance; however, it goes further by suggesting that the zone of optimum arousal differs for different activities. As shown in Source 7, lawn bowlers will optimise performance by maintaining lower levels of arousal so they can perform controlled movements. Rugby players, on the other hand, will optimise performance by maintaining higher levels of arousal so they can generate maximum power during tackles and sprints.

Catastrophe Model

The Catastrophe Model, proposed by John Fazey and Lew Hardy in 1988, extends on Inverted U Theory by suggesting that the interplay between cognitive and somatic anxiety impacts the shape of the arousal curve. An athlete experiencing the physiological impact of anxiety or arousal (without accompanying cognitive effects) will follow the gentle curve of the U shape. A combination of both cognitive and somatic anxiety, however, will inevitably lead to a catastrophic decline in the athlete's performance, as show in Source 8.

SOURCE 9 For modern pentathletes, like Australia's Chloe Esposito, achieving and maintaining the optimum zone of arousal is tricky – for example, they require stillness and accuracy for shooting but also aggression and speed for running.

PERFORMANCE | SKILL DRILL 4.4

Evaluate the impact of arousal on performance

>> Turn to pages 342–343 to complete this integrated physical performance activity.

4.4 Check your learning

Engage and understand

1 In your own words, **define** what is meant by the term 'arousal' in a sporting context.
2 **Describe** the relationship between arousal and performance.
3 **Look at** the four theories that are used to understand the relationship between performance and arousal in sport. **Identify** the theory that you think is the most useful and explain why.

Analyse and apply

4 **Compare** and **contrast** the arousal levels required for optimum performance in two or more of the physical activities you have studied so far this year.
5 **Differentiate** between trait and state anxiety. Use examples from your own experiences to enhance your response.

Evaluate and justify

6 Look carefully at the image of Serena Williams (Source 3, page 206). **Conduct** some additional online research to find out what events contributed to Serena's state of over-arousal. **Evaluate** the impact of the situation on her arousal levels and subsequent performance.
7 **Assess** the physical activity you are studying and **justify** why your zone of optimum functioning might be different to those of your friends and classmates.
8 Download the trait anxiety vs state anxiety questionnaire provided on your obook assess. Complete the questions. In one paragraph, **synthesise** and **evaluate** your results.
9 Look at the image of Chloe Esposito (Source 9). Conduct some online research to **assess** how she was able to reduce her arousal levels after a 3 kilometre run (in a packed stadium) to a level that allowed her to shoot so quickly and accurately that she was able to jump from 7th to 1st place in the women's modern pentathlon at the 2016 Olympic Games.

SOURCE 10 Achieving and maintaining optimum arousal levels will result in optimum performance.

Check your obook assess for the following additional resources and more:

- **» Student book questions** 4.4 Check your learning
- **» Skill Drill worksheet** 4.4 Evaluate the impact of arousal on performance
- **» Video weblink** Serena Williams at the 2018 US Open
- **» In the news** Serena Williams fined over outbursts at 2018 US Open

4.5 Attention and concentration

That's a goal!

By the end of Section 4.5, you should be able to:

→ **define** the concepts of attention and concentration

→ **identify** the two dimensions of attention (i.e. broad–narrow and internal–external)

→ **explain** the roles that attention and concentration play in optimising the performance of athletes.

attention
a technical term used by sports psychologists to refer to the specific ability of an athlete to attend and respond to appropriate internal (e.g. thoughts or feelings) and external (e.g. the starter's gun or an opponent) stimuli during training and competition

concentration
an everyday term used to describe how a person focuses their mental energy

selective attention
the ability to process and react to certain stimuli selectively (when several stimuli occur simultaneously)

relevant cues
essential (i.e. important) information that an athlete needs to focus on

irrelevant cues
extraneous (i.e. unnecessary) information that can distract an athlete

Attention and **concentration** are two more key concepts in sport psychology. In simple terms, attention and concentration are both concepts used to describe the level of focus and attentiveness a person dedicates to a particular task or stimulus.

People often use these terms interchangeably; however, when examining attention and concentration in the context of sport psychology, it is helpful to distinguish between them. In sport psychology:

- **attention** is the technical term used to refer to the specific ability of an athlete to attend and respond to appropriate internal stimuli (e.g. thoughts or feelings) and external stimuli (e.g. the starter's gun or an opponent) during training and competition.
- **concentration** is the everyday term used to describe how a person focuses their mental energy. Strong performances are often said to be the result of 'good concentration' and poor performances the product of 'lapses of concentration'.

In order to maintain the optimum levels of attention and concentration, players must use **selective attention**. This is where they narrow their focus to the specifics of the task required of them (known as **relevant cues**) and block out distractions (known as **irrelevant cues**). For example, during play a soccer goalkeeper will focus on relevant cues (such as the position of the ball, the speed of its approach and the location of other players on the field) and ignore irrelevant cues (such as a bird flying overhead, taunts from opponents, cheers from the crowd).

SOURCE 1 Successful athletes use selective attention to block out distractions and focus closely on the task at hand.

Achieving and maintaining optimum attention and concentration

Sport psychologists generally agree that achieving optimum performance is dependent on an athlete focusing on the right thing at the right time. Many theories have been developed to explain the relationship between attention and performance, but the most popular and widely accepted theory is known as Nideffer's Attentional Model.

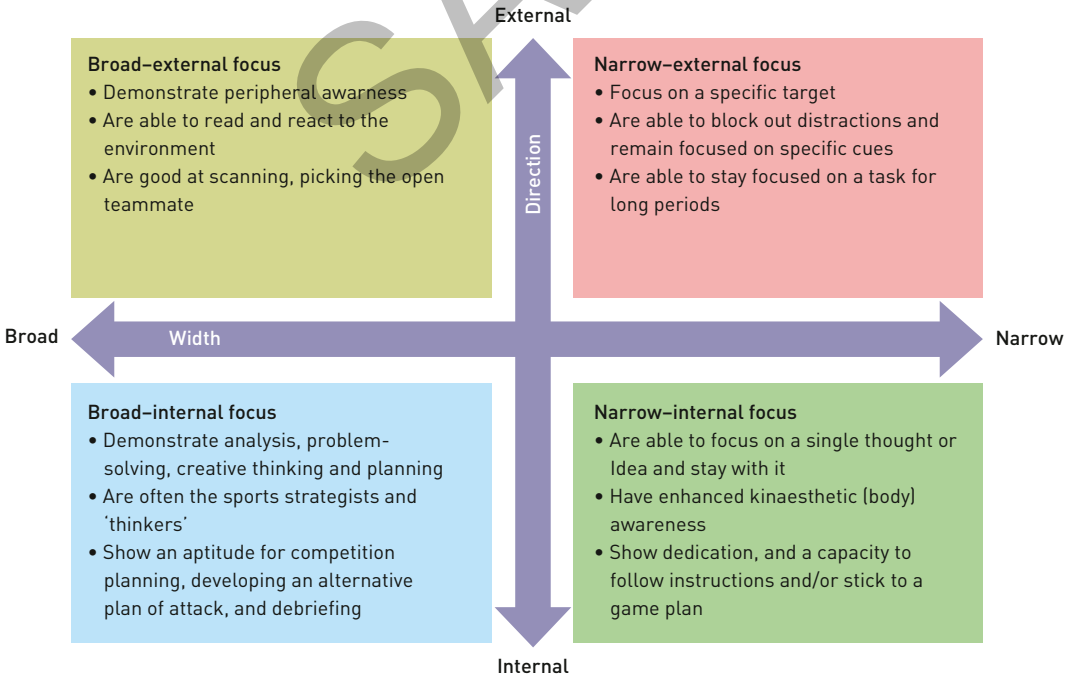
Nideffer's Attentional Model

Nideffer's Attentional Model was developed in 1981 by US sport psychologist Robert Nideffer (Source 2). It helps to define and explain attention and concentration behaviours in athletes by proposing that attention exists in two dimensions:

- width – this relates to the *amount* of information or cues an athlete perceives. These cues exist on a continuum from narrow focus (i.e. a single cue) through to broad focus (i.e. many cues)
- direction – this relates to the *source* of stimuli that an athlete perceives. These sources also exist on a continuum from internal (e.g. an athlete's own thoughts and feelings) through to external (e.g. an opponent or the wider environment).

Source 2 shows the model's four distinct types of attentional focus:

- broad–external – athletes with this focus are often referred to as 'aware'; for example, a volleyball setter who scans the defence before setting up the play.
- broad–internal – athletes with this focus are often referred to as 'strategic'; for example, a golfer carefully considering shot selection prior to addressing the ball.
- narrow–external – athletes with this focus are often referred to as 'focused'; for example, a tennis player focusing on her toss as she begins to serve.
- narrow–internal – athletes with this focus often referred to as 'systematic'; for example, a basketball player reviewing his self-talk prior to taking a free throw.



SOURCE 2 Nideffer's Attentional Model has four distinct types of attentional focus, with a number of characteristics common to each type.

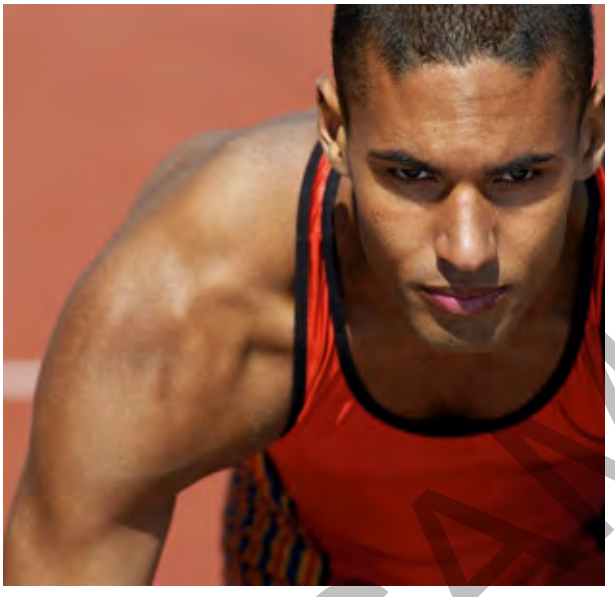
STUDY TIP

Keeping a video log of your performance can be a great way of assessing your levels of attention and concentration. Store video clips of your performance in a folder on your computer and add either a voice over or a short written analysis of each one as you go. Look beyond physical performance. For example, note changes in your attention and concentration. Make a note of any links between strategies you have been implementing off court (e.g. mental rehearsal and meditation) and changes in performance on court.

The following Theory in action summarises strategies for improving concentration.

Theory in action | Improving concentration

Concentrating on the right things at the right time is one of the most important skills an athlete can possess. All athletes recognise that they have difficulties concentrating for the duration of a performance or at specific times. Difficulty concentrating is usually due to distractions. Rather than concentrating on appropriate cues, athletes become distracted by thoughts, emotions and other events. These distractions can be both internal and external. Sport Australia have outlined strategies for overcoming these distracters.



SOURCE 3 Sports Australia recommends the following strategies for improving concentration.

INTERNAL DISTRACTERS (THOUGHTS, WORRIES AND CONCERNS)

→ Living in the past – worrying about what just happened (especially mistakes).
→ Living in the future – thinking about results, outcomes and consequences.
→ Self-talk – especially when it is negative.
→ Arousal levels and anxiety – high arousal and anxiety can narrow your attentional field (that is, tunnel vision) and decrease environmental scanning. Alternatively, low arousal can cause a broadening in your attentional field and a focus on inappropriate cues.
→ Fatigue – focus requires effort, so if you are feeling fatigued it can sometimes be difficult to find the energy required to maintain your focus.

EXTERNAL DISTRACTERS

→ Visual distracters – crowd, competitors, scoreboards, cameras, etc.
→ Auditory distracters – talking, laughing, traffic, mobile phones, etc.
→ Gamesmanship – sledging, trash-talk.

STRATEGIES FOR IMPROVING CONCENTRATION

Attention control and concentration are skills that can be improved and worked on just like a physical skill. There are a number of sport and non-sport related strategies and exercises that can be used to assist you in enhancing your attention and concentration skills. These are:

→ Simulation training – identify the types of distractions that are present during competition and systematically incorporate and learn to manage these distractions in training.
→ Cue words – identify some key words/phrases that remind you of what you need to concentrate on.
→ Positive self-talk – repeat positive self-statements/affirmations (for example, 'I am feeling fit and strong', 'I am ready to go', 'I can do this').
→ Switching on and off – identify appropriate points during training or competition at which to 'switch on' (that is, direct attention and energy to the task at hand) and 'switch off' (that is, allow thoughts/attention to shift to a non-performance focus).
→ 'Parking' thoughts – try 'parking' your distracting thoughts. This involves putting them aside until a later time, typically by using a rational self-talk instruction or form of imagery that places the troublesome thought in a secure and non-distracting place until after the performance.
→ Staying in the 'here and now' – the only time frame that you have any control over is the present and therefore the importance of being present-focused cannot be overstated.

Sledging is a practice used by some cricket players to distract opponents and interfere with their concentration. This practice is further explored in the Theroy in action below.

Theory in action | Sledging: a true test of concentration

Cricket players are well known for their controversial use of sledging during matches. Sledging is a practice whereby athletes use trash talk to distract their opponents and break their concentration.

A batter in cricket is required to face a hard leather ball – sometimes travelling at speeds over 140 km/h – while also considering the placement of other players on the field, their grip on the bat, and the tally on the scoreboard. A good batter will also try to detect cues in the bowler's grip prior to them releasing the ball, so they can predict the type of delivery they are about to face.

To achieve this broad–external focus, the batter must be fully attentive. However, between balls, it is common for the bowler, wicketkeeper and slip fielders to make derogatory comments to (i.e. sledge) the batter, in the hope that his or her focus will shift to irrelevant cues and they will be put off their game.

When interviewed on the topic of sledging, one cricketer said: 'As a bowler, if you see a guy that is in form and in a routine, you almost want to say more to him to try and upset his rhythm ... It's all about trying to draw the batter outside of their own little bubble and give them something else to think about.'

SOURCE 4 Australian cricket player Mitchell Johnson exchanges words with England's Ben Stokes during the Second Ashes Test at Adelaide Oval in 2013.

Experienced cricket players must adopt strategies to overcome the distraction of sledging and maintain appropriate attention at all times. It only takes one moment of lapsed concentration for a costly error to be made.

4.5 Check your learning

Engage and understand

1 In your own words, **explain** the key difference between 'attention' and 'concentration' in sport psychology.

2 Read 'Sledging: a true test of concentration'. **Describe** the potential impact of sledging on an athlete's attention.

3 **Summarise** the two dimensions of attention and explain the difference between them.

Analyse and apply

4 Download the blank template of Nideffer's Attentional Model from your obook assess. Using Source 2 as a guide, **classify** each of the sports and coaching skills in the table provided into the most appropriate quadrant.

Sports skills	Coaching skills
→ Tackling in football	→ Developing a game plan
→ Putting in golf	→ Helping an athlete correct an error
→ Psyching up for the game	→ Listening to a player
→ Rebounding in basketball (when the ball has hit the rim)	→ Deciding how to respond to an official's bad call
→ Listening to instructions	→ Delivering a speech
	→ Analysing your competence as a coach

Evaluate and justify

5 **Evaluate** your ability to maintain appropriate levels of attention and concentration in your selected physical activity this term. Your evaluation should include examples and make specific reference to Nideffer's Attentional Model.

Check your obook assess for the following additional resources and more:

- **» Student book questions**
  4.5 Check your learning
- **» Video**
  Nideffer's Attentional Model
- **» Student worksheet**
  4.5 Attention and concentration worksheet
- **» Weblink**
  Improving concentration

4.6 Team dynamics and cohesion

That's a goal!

By the end of Section 4.6, you should be able to:

→ **define** the concept of team dynamics and cohesion

→ **identify** key stages of team development (i.e. forming, storming, norming, performing) and explain the importance of group roles, group norms and social support

→ **explain** the role that team dynamics and cohesion plays in optimising performance.

team dynamics
the relationships between all of the different members of a group (who are working together to achieve a common goal)

cohesion
(in sport) the extent to which individual members of a team can work together and function as a single unified (i.e. united) whole

Team dynamics and **cohesion** are key concepts in sport psychology. Both terms are used to describe the individual relationships between members of a group, as well as their ability to work together.

It is common to hear these terms used interchangeably in conversation; however, when examining team dynamics and cohesion in the context of sport psychology, they have different meanings. In sport psychology:

- team dymamics is a term used to describe the relationships between all of the different members of a group (who are working together to achieve a common goal)
- team cohesion is used to describe the extent to which individual members of a team can work together and function as a single, unified (i.e. united) whole.

Strong team dynamics and cohesion are the key elements that transform a group of individual athletes into a high-performing and successful team.

SOURCE 1 Strong team dynamics and cohesion can enable a group of skilled individual athletes to rise to the top of their field as a unified team.

Achieving and maintaining optimum team dynamics and cohesion

It's not difficult to think of a successful sporting team, but it can be challenging to work out exactly why certain teams are more successful than others. One way in which coaches and sport psychologists try to understand this is by examining team dynamics and cohesion. Over the years, many theories have attempted to explain the link between team dynamics, cohesion and performance. One of the most popular and widely accepted is known as the Tuckman's Stages of Group Development.

Tuckman's Stages of Group Development

Tuckman's Stages of Group Development was first developed in 1965 by US psychologist Dr Bruce Tuckman. Tuckman proposed that there were four distinct stages that teams go through in order to achieve cohesion (i.e. function together effectively) and deliver high quality results:

- Stage 1 – **Forming**
- Stage 2 – **Storming**
- Stage 3 – **Norming**
- Stage 4 – **Performing**

Stage 1 – Forming

In the forming stage, a group of individuals come together for the first time and begin to get to know each other. Coaches and athletes begin to think about establishing:

- **group roles** – the formal and informal positions that each individual on the team holds. Formal roles include positions of authority (such as captain and vice-captain) and playing positions (such as fullback, prop and hooker in rugby). Informal roles include positions that develop over time based on the individual personalities of the players (such as 'the joker', 'the morale booster', 'the problem solver', 'the good listener' and 'the Zen master')
- **group norms** – the rules and expectations set out for all members of the team to follow. Group norms include expectations and rules relating to things like training commitments, equipment requirements, dress codes and ethical conduct
- **group goals** – the vision or aims of a team for their time together (i.e. the season). Goals should be shared by the entire group and can be related to outcomes (e.g. team ranking at the end of the season) or performance (e.g. mastering a particular team strategy or completing a team challenge).

Stage 2 – Storming

In the storming stage, the team begins to work, train, play and compete together. Team members compete with each other for status and acceptance of their ideas. Conflict between team members is common, but roles can become clearer as a result and norms can be refined to suit the needs of the group. Good resolutions to conflict can strengthen team cohesion. Coaches and athletes work to develop:

- **social cohesion** – the degree to which team members like each other and interact together
- **task cohesion** – the ability to identify closely with the group's goals and to experience success in achieving those goals.

group roles
the formal and informal positions that each individual on the team is assigned or adopts

group norms
the rules and expectations set out for all members of the team to follow

group goals
the vision or aims of a team for their time together (i.e the season)

social cohesion
the degree to which team members like each other and interact together

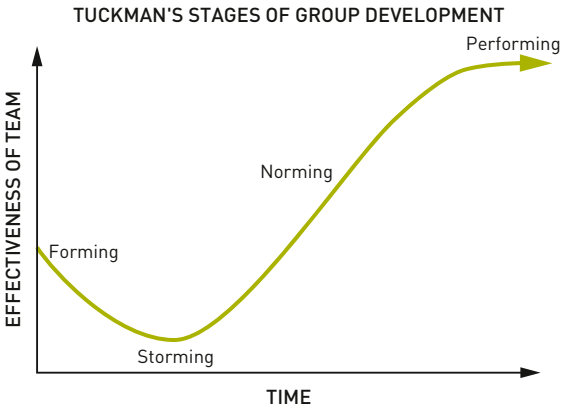
task cohesion
the ability to identify closely with the group's goals and to experience success in achieving those goals

Stage 3 – Norming

In the norming stage, the team is more settled and there is a greater acceptance of individual positions within the group. There is also wider acceptance of the rules and expectations being placed on the group. Rather than competing against each other for status and acceptance, members are able to work together towards a common goal. Coaches and athletes work to develop:

social support
the ability for team members to trust each other and actively seek each other out for assistance and support

- **social support** – the ability for team members to trust each other and actively seek each other out for assistance and support.



SOURCE 2 As a team works together over time, they pass through Tuckman's stages of team development. The effectiveness of the team will vary according to each stage of development.

Stage 4 – Performing

In the performing stage, the team is functioning at a very high level and can work effectively to achieve identified goals. Social and task cohesion and are at optimum levels and performance is strong as a result. In the face of conflict, group members can work together to find a solution (often without coaches or training staff). Team members are well aware of each other's strengths and weaknesses, and work well to optimise the team's performance.

It is important to note that not every team progresses to the performing stage. Many teams stop developing at the norming stage. It is also common for teams to fluctuate between the second, third and fourth stages of team development for a number of reasons, such as:

- individual team members may start working independently
- established members may leave the team and new members may join the team
- coaching and training staff may change, leading to changes in team goals and training expectations
- unexpected issues arise that challenge the team unity.

The New Zealand All Blacks are an example of a high-functioning sports team. Their success is further explored in the Theory in action below.

Theory in action | The world's most successful sporting team

According to many sporting agencies and media outlets, New Zealand's national rugby team the All Blacks is the most successful international sports team of all time.

In over a century of competition, the All Blacks have won more than three-quarters of their 538-plus matches. Since the beginning of the 2010 season, they have won an incredible 72 matches out of 80 played – a win ratio of 90 per cent. They have done the unprecedented, by winning back-to-back Rugby World Cups, retaining the Bledisloe Cup (2003–2017) and winning the Rugby Championship nine times over the past 12 years.

So, what is the secret to their incredible success? Team dynamics and cohesion have a lot to do with it.

The All Blacks team culture always puts the team before the individual, no matter how talented an individual player might be. It is this obsession with team unity that makes them an awesome winning unit.

The tantrums of overpaid stars that are a reality in many other teams are not tolerated by the All Blacks. The sense of honour and respect for previous achievements and holders of the jersey dictates the code of behaviour for new players joining the team. The team mantra is 'Better people make better All Blacks'– a saying that emphasises the importance of good character both on and off the field.

SOURCE 3 For over a century, the All Blacks have performed the haka (a traditional Māori dance) as a powerful pre-match team ritual.

PERFORMANCE

SKILL DRILL **4.6**

Assess the impact of team cohesion on performance

>> Turn to pages 344–345 to complete this integrated physical performance activity.

4.6 Check your learning

Engage and understand

1 **Describe** the characteristics of an effective team.
2 In your own words, **summarise** the four stages of Tuckman's Stages of Group Development.
3 **Explain** the difference between group roles, group norms and group goals.
4 Read 'The world's most successful sporting team'. **Identify** the reasons given for the phenomenal success of the All Blacks.

Analyse and apply

5 **Create** as many endings for this sentence as you can: 'A cohesive team is one that ...'
6 **Analyse** the role that trust plays in developing team cohesion.

Evaluate and justify

7 **Evaluate** which of the following scenarios would be most likely to result in a successful team:
   → One strong leader with ultimate authority over all members of the team.
   → A collection of individuals who have authority in certain sub-areas (i.e. defensive leader, offensive leader etc.)

   Justify your response.
8 Research the concept of group conformity in sport. **Investigate** the problems associated with non-conformity with regard to team dynamics. Record your findings in point form.
9 A salary cap is a limit placed on the amount a team can pay individual players. **Conduct** some online research to identify two or three potential impacts that salary caps can have on team dynamics.

Check your obook assess for the following additional resources and more:

- **Student book questions**
  4.6 Check your learning
- **Skill Drill worksheet**
  4.6 Assess the impact of team cohesion on performance
- **Video weblink**
  The New Zealand All Blacks performing a haka
- **Weblink**
  Tuckman's Stages of Group Development

4.7 Psychological techniques to optimise performance

That's a goal!

By the end of Section 4.7, you should be able to:

→ **identify** a number of psychological skills and techniques that can be used to optimise performance (i.e. ongoing techniques, pre-performance techniques and in-performance techniques).

Even the most capable, experienced and physically able athletes can struggle to deal with a range of common psychological problems, such as low levels of confidence, lack of motivation, feelings of stress and anxiety, and lack of attention and concentration.

The main difference between a successful and unsuccessful athlete is their ability to successfully identify and resolve psychological problems as they arise. A mentally strong athlete is one who can recognise and diagnose a psychological problem, and then apply a relevant technique before too much damage is done to their performance.

Psychological techniques

Psychological techniques can be applied at different times to help athletes overcome a range of challenges and problems. These skills and techniques can be organised into three categories, according to when they are best performed or applied. Source 1 outlines these technique categories, and a list of the particular psychological techniques that belong to each one. It's important to note that even though the psychological techniques in Source 1 have been organised into categories based on when they are best applied (i.e. ongoing, pre-performance and in-performance techniques), some of these techniques can also be applied at other times. Remember to practise all of these techniques as often as you can and work out what's best for you!

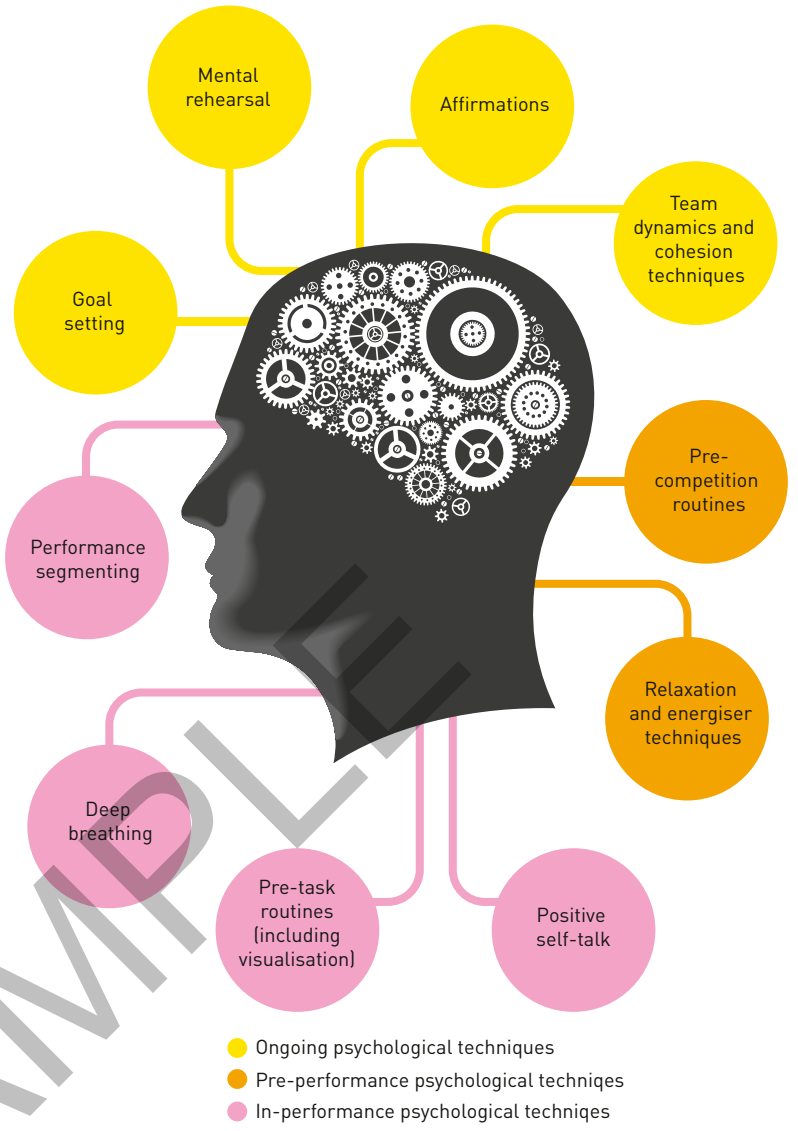
Category	Psychological techniques
→ **Ongoing psychological techniques** *Techniques that should be applied and then frequently revisited; they are best addressed outside of performances*	→ Goal setting → Mental rehearsal → Affirmations → Team dynamics and cohesion techniques
→ **Pre-performance psychological techniques** *Techniques that are best applied just before physical activity or competition*	→ Pre-competition routines → Relaxation and energiser techniques
→ **In-performance psychological techniques** *Techniques that are best applied during physical activity or competition*	→ Positive self-talk → Pre-task routines (including visualisation) → Deep breathing → Performance segmenting

SOURCE 1 Psychological techniques to deal with common problems among athletes

Developing a 'sport psychology resource kit'

As you learn about each of the skills and techniques in Source 1, you will be able to apply them to your own performances and the performances of other athletes. An awareness of the psychological concepts you learnt about earlier in this chapter, together with a strong understanding of the skills and techniques used to deal with them, will help you to develop a 'sport psychology resource kit'. This resource kit will contain a range of practical techniques and skills that you can apply in different situations and at different times to help you overcome problems and perform at your best.

While coaches should guide athletes towards the psychological techniques they think will be most beneficial, it is also important for the athlete to have some autonomy over the techniques they choose to apply. This often helps athletes maintain a level of mental strength that will keep them confident, motivated and focused throughout their performance, resulting in a better outcome.



SOURCE 2 A sport psychology resource kit contains a range of practical techniques to help you overcome problems and perform at your best.

4.7 Check your learning

Engage and understand

1 In your own words, **explain** what a sport psychology resource kit is.

2 **Compare and contrast** the three categories that psychological techniques can be organised into. In your opinion, which category is the most effective? Explain your answer.

Evaluate and justify

3 Look at the skills and techniques listed in Sources 1 and 2.

a Based on your current knowledge and understanding of each one, **evaluate** two or three skills or techniques and **justify** why you think these will be most valuable to you in your selected physical activity.

b As you learn more about each skill or technique over the course of this topic, revisit your answer and revise it, if necessary.

Check your obook assess for the following additional resources and more:

» **Student book questions**
4.7 Check your learning

» **Student worksheet**
4.7 Psychological techniques worksheet

» **Weblink**
Psychological techniques in sport

4.8 Goal setting

Ongoing psychological techniques

That's a goal!

By the end of Section 4.8, you should be able to:

→ **define** the strategy of goal setting

→ **identify** and **describe** three types of goals (i.e. process goals, outcome goals and performance goals)

→ **explain** the SMARTER principle and **create** SMARTER goals

→ **explain** how effective goal setting techniques can optimise performance.

FOR THE RECORD!

Throughout 2009, Kurt Fearnley (see Source 1) won wheelchair marathons in London, Paris, Seoul, Sydney, Chicago and New York. He also crawled the gruelling 96 kilometre Kokoda Track in Papua New Guinea. These incredible accomplishments would not have been possible without a strong ability to set and achieve goals.

Goal setting is a technique used to identify one or more things that you want to achieve and to establish measures to help you monitor and track your progress towards achieving them.

Goal setting is an ongoing psychological technique, meaning that it should be applied early on in an athlete's sporting pathway, and revisited regularly in training and performance as a source of motivation. Goals can also help an athlete achieve optimal arousal and concentration, and enhance team cohesion. Athletes need to develop, evaluate and revise their goals on a regular basis in order to optimise their performance.

Effective goal setting

Setting goals is vital for all athletes wanting to achieve success in their sport. Having goals serves a number of purposes and can be effective in strengthening a range of psychological traits, including confidence, motivation and concentration.

Athletes should analyse the types of goals they set to ensure they are maximising the benefits these goals can provide. In sport psychology, there are three main types of goals:

- **outcome goals**
- **performance goals**
- **process goals**.

Understanding the relationship between these types of goals can help athletes achieve their aim, one step at a time.

SOURCE 1 Australian Paralympian Kurt Fearnley is a three-time gold medallist who is expert at setting both personal and professional goals and working hard to achieve them.

Outcome goals

Outcome goals focus on winning and losing (i.e. the specific outcome of a performance or competition). For example, an outcome goal might be:

- to win an Olympic gold medal in basketball
- to place in the top 10 in the Brisbane Marathon.

While it is natural to make winning the goal, focusing only on outcome goals can contribute to anxiety in athletes, and must be combined with performance and process goals to help athletes remain 'in the zone' throughout their performances.

Performance goals

Performance goals focus on a particular performance standard that an athlete is trying to achieve. Performance goals are often designed to help athletes achieve their outcome goals by breaking them down into a series of smaller, more manageable targets. They focus on various aspects of an athlete's game, often using statistics to set the goal. For example, a performance goal might be:

- to improve shot accuracy from 60 to 70 per cent
- to complete a 20 kilometre training run in under 90 minutes.

Performance goals push athletes to monitor and record their improvement over time.

Process goals

Process goals focus on a specific technical aspect of an athlete's overall performance. They are often designed to help athletes achieve their performance goals by breaking them down into smaller targets that are completely under their own control. For example, a process goal might be:

- to hold the basketball shot follow through for one more second
- to train four days a week.

Process goals can help athletes manage the anxiety that develops when the focus is solely on the outcome. Process goals can also help athletes focus their attention on aspects of their technique.

As shown in Source 2, athletes have more control over process and performance goals than outcome goals and can feel a greater sense of accomplishment and competence as they achieve them. Increased competence results in greater self-confidence and motivation.

goal setting
a technique used to identify a desired achievement and establish measures to track progress towards achieving it

outcome goal
a type of goal that focuses on winning and losing

performance goal
a type of goal that focuses on enhancing specific aspects of performance, often using statistics

process goal
a type of goal that focuses on improving technique

PROCESS GOAL
To improve follow through by one second

PERFORMANCE GOAL
To improve shot accuracy from 60% to 70%

OUTCOME GOAL
To win an Olympic gold medal in basketball

More control — Less control

SOURCE 2 Outcome goals, performance goals and process goals need to be combined to optimise an athlete's performance.

Setting SMARTER goals

SMARTER principle
an acronym that athletes can use to remember all the elements required for effective goal setting (i.e. SMARTER goals are Specific, Measurable, Achievable, Relevant, Time-bound, Evaluated, Recognised and rewarded)

Athletes need to monitor and assess the progress of their goals over time, and one of the most popular ways to do this is by applying the **SMARTER principle**.

SMARTER is an acronym (i.e. a word formed from the initial letters of other words) that athletes can use to remember all the elements required for a goal to be effective. For example, rather than writing general goals such as 'I want to get better at tennis' or 'I want to play well in the game this weekend', the SMARTER principle helps to identify the specific level required to attain and then measure the goal. Source 3 describes how this principle can be used for setting goals.

Specific	Effective goals are specific. Record as much detail about the goal as possible. For example: → I want to get better at tennis. ✗ → I want to achieve 50% of my first serves in court. ✓
Measurable	Effective goals are measurable. Be clear about what success will actually look like so that you can objectively assess whether you have achieved it. For example: → I will improve my service game by a lot. ✗ → Within 6 months I will achieve 50% of my first serves in court. ✓
Achievable	Effective goals are achievable. Think about whether your goal is appropriate for you. (i.e. Do you have the necessary time, money, talent, patience and/or dedication?) Goals should motivate you to challenge yourself, but they must also take your other commitments into account (e.g. school, work and family). For example: → I will be world number 1 tennis player in 6 months. ✗ → I will be club champion in 6 months. ✓
Relevant	Effective goals are relevant. Be clear about what you want so you can move in the right direction. Think about why you want to achieve this goal and whether it aligns with other goals you may have. For example: → I want to win my tennis club championship because I like to win trophies. ✗ → I want to improve my first service percentage from 20% to 50% because it will help boost my confidence, put me in a better position at the beginning of each rally and prove that I am a capable player. ✓
Time-bound	Effective goals are time-bound. Set a timeline for achieving your goals. For example: → I will improve my service game by a lot. ✗ → By January next year I will achieve 50% of my first serves in court. ✓
Evaluated	Effective goals are evaluated. Revisit your goals on a regular basis (every day, week or month) to ensure that you are on track. It's also important to remember that situations change – e.g. if you are injured or your priorities change, then your goals may need to change too.
Recognised and rewarded	Effective goals are recognised and rewarded. Celebrate when you achieve your goals. Rewarding yourself is a good way to create a positive feeling of success, and it will inspire you to set your next goal and achieve it.

SOURCE 3 Using the SMARTER principle gives athletes the best chance at achieving their goals.

4.8 Check your learning

Engage and understand

1 **Explain** why it is important to set goals.

2 **Describe** the key features of outcome goals, performance goals and process goals. **Summarise** the differences between each.

3 **Identify** two or three problems that might arise from focusing solely on outcome goals.

Analyse and apply

4 **Apply** the SMARTER goals acronym to develop your own set of specific goals to improve performance in your current physical activity.

5 **Categorise** each of the following as general goals or SMARTER goals.

→ Play smarter in my tennis matches.

→ Be more prepared for training sessions.

→ Increase my speed off the blocks by 0.2 seconds by the end of the season.

→ Become more accurate in passing the volleyball.

→ Run an interval training session of ten 50 metre sprints at 80 to 90% intensity with a rest/work ratio of 1:5 by week 3 of the touch football season.

6 **Identify** the problems with the general goals in Question 5 and rewrite them as SMARTER goals.

Evaluate and justify

7 Refer to Source 3 and use it to help you **create** four SMARTER goals related to your selected physical activity this term. Once you have created your goals, swap them with another student in your class to check that they meet the relevant criteria.

8 **Reflect on** a time when you set yourself a goal. It could be related to school, work, sport or any other aspect of your life.

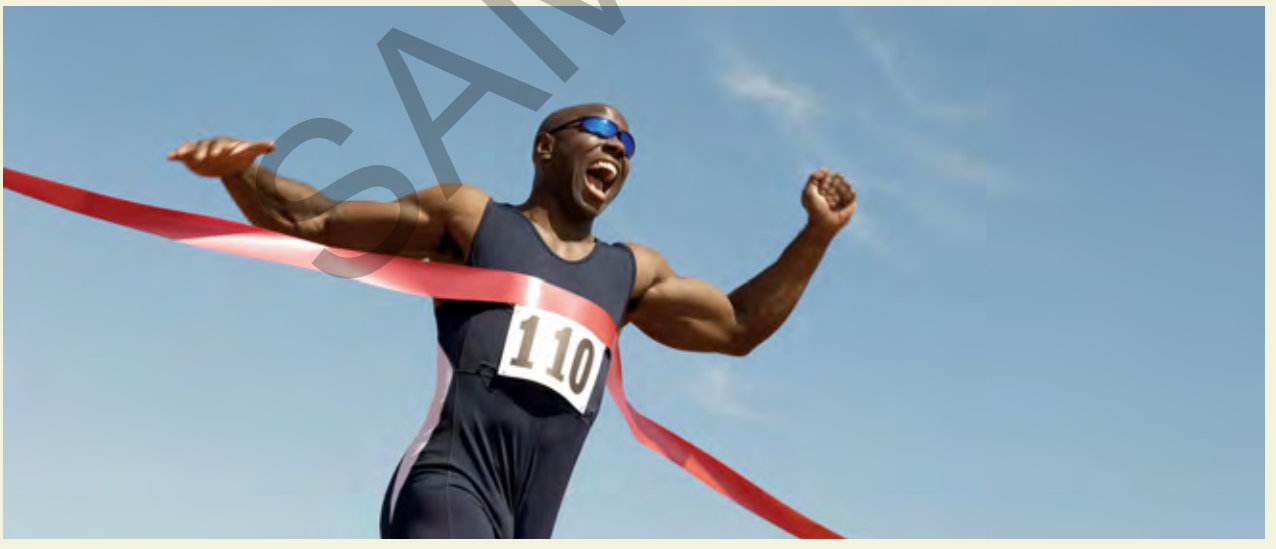
a Write down the goal.

b Consider whether or not you achieved your goal (or partially achieved it).

c Using what you have learned about the SMARTER principle, **justify** if the goal was an effective one. **Determine** which elements of the goal could have improved.

d Rewrite the goal, taking all aspects of the SMARTER principle into account.

e **Evaluate** the effectiveness of your goal setting techniques. How could you improve your skills in future?



SOURCE 4 Goal setting creates a path for you to follow. It helps you to understand where you are right now and where you want to go in order to achieve optimal performance.

Check your obook assess for the following additional resources and more:

» **Student book questions**
4.8 Check your learning

» **Video weblink**
Effective goal setting: Interview with Kurt Fearnley

» **Weblink**
Tips for setting SMARTER goals

4.9 Mental rehearsal

Ongoing psychological techniques

That's a goal!

By the end of Section 4.9, you should be able to:

→ **define** the technique of mental rehearsal (including visualisation)

→ **explain** and **apply** the PETTLEP model for effective mental rehearsal

→ **explain** how effective goal setting techniques can optimise performance.

mental rehearsal
a technique used by athletes to develop skills, reduce anxiety, increase confidence and concentration, and ultimately improve performance

Mental rehearsal is a technique used by athletes to develop skills, reduce anxiety, increase confidence and concentration, and ultimately improve performance. The process involves imagining a performance from beginning to end and rehearsing every aspect of it in the mind. In other words, there is no visible physical movement involved in mental rehearsal.

Mental rehearsal is an ongoing psychological technique, meaning that it can be applied at any time. Athletes will often practise mental rehearsal in their downtime before a big performance; however, it can also be useful just prior to performance and, in some cases, during performance.

Effective mental rehearsal

Numerous studies have found that a combination of both mental and physical rehearsal results in better performances than just mental or physical rehearsal. Top athletes such as Michael Phelps, Sally Pearson, Andy Murray and Cristiano Ronaldo all include mental rehearsal as a key component of their preparation and performance.

Mental rehearsal can help athletes to convert distraction into focus, anxiety into confidence, and timidness into assertiveness. Rehearsing a performance in one's mind helps to create clarity around performance expectations. It can also help athletes cope with performance pressures (such as cheering crowds and television cameras) that can't always be replicated during training.

To get the most out of mental rehearsal, athletes need to think beyond just the visual aspects of a performance (i.e. what it will look like). Good mental rehearsal should involve as many of the senses as possible. The more sounds, smells, physical sensations and even tastes of the performance that can be incorporated into mental rehearsal, the more effective it will be.

It is believed that mental rehearsal works because imagining an action creates electrical activity in the muscles involved in the movement, even though they do not visibly move. Mental rehearsal also allows the brain to work out problems, propose solutions and make decisions. It also strengthens the neural connections between the brain and the muscles, which are needed to create the movement.

SOURCE 1 Effective mental rehearsal allows an athlete to not only see the performance in their mind, they can also feel it, hear it, smell it and taste it.

Visualisation

Visualisation is a technique related to mental rehearsal. It involves the use of imagery to create a mental picture of just one aspect of a physical performance or skill. Many athletes include visualisation as a part of their **pre-task routines**, by imagining themselves successfully performing the action needed to produce the desired result.

The term visualisation is sometimes used interchangeably with mental rehearsal, but in sport psychology, there are three key differences between these techniques:

- mental rehearsal involves rehearsing the entire performance (e.g. an entire game), whereas visualisation involves rehearsing a single aspect of the performance (e.g. a shot at goal)
- mental rehearsal often happens prior to training or competition, whereas visualisation often happens immediately before the performance (e.g. just prior to the shot at goal)
- mental rehearsal and visualisation both include visual aspects of the performance, but mental rehearsal also includes the other senses (smell, sound, feeling and taste).

visualisation
a technique that involves creating mental images to recreate real-life situations

pre-task routines
actions performed by athletes immediately prior to performing a task (e.g. a serve, free kick or pitch) within a performance

The PETTLEP model

The **PETTLEP model** was proposed by English sport scientists Paul Holmes and David Collins in 2001. It is a framework designed to help athletes get the most out of mental rehearsal and visualisation by making it functionally equivalent (i.e. as close as possible) to the real situation. PETTLEP is an acronym that athletes can use to remember all of the elements required for effective mental rehearsal and visualisation, as shown in Source 2.

PETTLEP model
a framework to help athletes get the most out of mental rehearsal and visualisation by making it as close as possible to the real situation

Physical	Imagine the physical characteristics of your body, including your sports uniform and equipment. You could also take the same physical stance (or position) that you would during performance.
Environment	Imagine the location where the performance will take place, including the surface of the playing area and the stadium and spectators around it.
Task	Imagine the exact requirements of the task. It is important to visualise the task being completed successfully, but it must also be at a level that is equivalent to your role and skill level.
Timing	Imagine the task or performance in real time. Generally, this is more effective than imagining tasks in slow motion; however, there are occasions where slow motion imagery can assist a player wanting to perfect a more difficult, technical element.
Learning	Imagine the task or performance that best suits your level of learning. Adapt imagery to reflect your development of skills of over time and any additional demands being placed on you.
Emotion	Imagine yourself feeling the same types of emotions as you would during a performance. If you generally feel anxious during a game, imagine that feeling during mental rehearsal too. However, avoid focusing too heavily on negative emotions such as panic and fear. Steer yourself towards more positive and constructive emotions instead.
Perspective	Imagine the task or performance from your own point of view. This is known as internal perspective (i.e. through your own eyes), which is generally more effective than external perspective (i.e. through the eyes of a spectator). Both perspectives are acceptable, though it is generally left to the athlete to choose. It is sometimes helpful to change perspectives to see if it results in any additional benefits.

SOURCE 2 The PETTLEP model helps guide athletes towards more effective mental rehearsal.

FOR THE RECORD!

Beach volleyball players Natalie Cook and Kerri Pottharst attributed a large part of their Sydney 2000 Olympic Games gold medal win to mental rehearsal. For example, they rehearsed what they would say to people on the day of the match and they visualised key moments of the match itself, particularly the moment they would finally serve for the win.

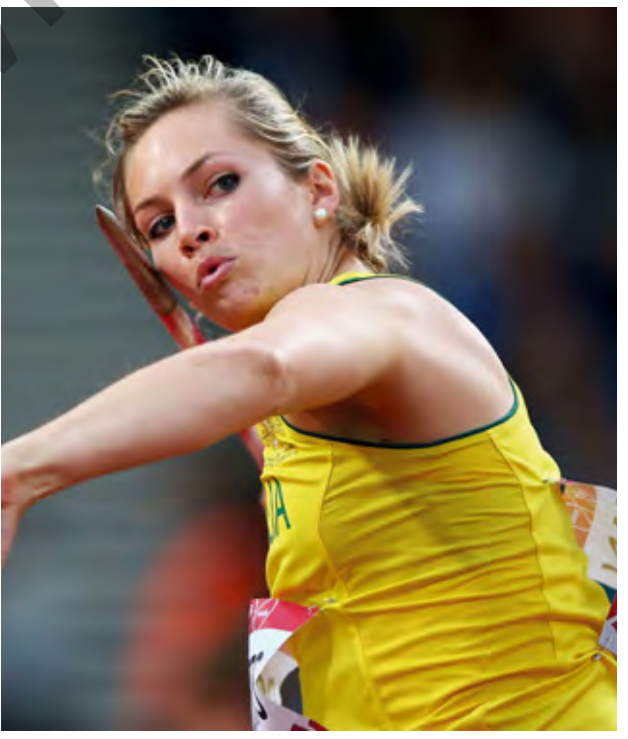
SOURCE 3 The use of mental rehearsal during preparation and performance may have helped retired US swimmer Michael Phelps (centre) to become the most successful Olympian of all time, with a total of 28 medals.

Theory in action | Olympic athletes harness the power of the mind's eye

Olympic athletes spend a large amount of their time training for events. However, a study conducted at the 1980 Winter Olympics, which compared the training schedules of four groups of Olympic athletes, revealed that the athletes who pictured themselves crossing the finish line first were more likely to do just that. Each group in the study was assigned a different combination of physical and mental training:

- → Group one: 100% physical training
- → Group two: 75% physical training, 25% mental training
- → Group three: 50% physical training, 50% mental training
- → Group four: 25% physical training, 75% mental training.

The scientists found that the fourth group were the top performers during the Olympics. As a result of these findings, over the last 20 years, the United States Olympic Committee has increased the number of its full-time sport psychologists from just one to six.



SOURCE 4 Australian javelin thrower Kelsey-Lee Roberts uses mental rehearsal techniques to help her prepare for competition.

What makes visualisation such a powerful technique for success?

According to Dr Srini Pillay, a US psychiatrist, brain researcher and author, 'We stimulate the same brain regions when we visualise an action as we do when we actually perform that same action'.

Visualisation becomes a sort of conditioning for the brain – establishing a goal, then visualising achieving that goal in detail and focusing on it over the long term. These simple techniques help the brain to know what to look out for. Without this conditioning, critical information that can help to achieve goals could end up as background noise.

PERFORMANCE

SKILL DRILL **4.9**

Assess the impact of mental rehearsal on performance

>> Turn to pages 346–347 to complete this integrated physical performance activity.

4.9 Check your learning

Engage and understand

1 In your own words, **define** 'mental rehearsal'.
2 **Differentiate** between mental rehearsal and visualisation.
3 **Describe** the process of mental rehearsal, using a sporting example to demonstrate how it works.
4 **Explain** how a quiet space can enhance mental rehearsal.

Analyse and apply

5 **Compare and contrast** internal and external perspectives in mental rehearsal. Which perspective do you prefer to use when visualising your performance? Explain the reasons behind your choice.
6 Download the blank PETTLEP template provided on your obook assess and use it to plan a mental rehearsal of your performance in a sport of your choice. This can form the basis for your own mental rehearsal.
7 **Reflect on** how mentally rehearsing tonight might improve your next physical performance in PE. **Consider** which elements from PETTLEP will be crucial to improving your performance.
8 Read 'Olympic athletes harness the power of the mind's eye'. **Consider** why the athletes who did 25% physical training and 75% mental training performed better at the Olympics than those who did 100% physical training.

Evaluate and justify

9 Susie and Mei are both preparing for a golf tournament. They understand the importance of mental rehearsal in their preparations.
→ Susie uses an external perspective and visualises herself hitting a hole-in-one on each hole. She sees the ball clearly rolling into the hole and feels excited to start the tournament.
→ Mei mentally rehearses her swing, watching the club move through the air to hit the ball in the 'sweet spot' off the tee. She hears the crowd cheering and feels the butterflies in her stomach dissipating after her first successful shot.
a Whose mental rehearsal do you think will be more effective? **Justify** your decision using the PETTLEP model.
b What aspects of the PETTLEP model could help improve Susie and Mei's mental rehearsal? **Propose** strategies that you believe will help to improve their technique.

Check your obook assess for the following additional resources and more:

» **Student book questions**
4.9 Check your learning

» **Skill Drill worksheet**
Assess the impact of mental rehearsal on performance

» **Video weblink**
Mental rehearsal: Interview with Michael Jordan

» **Weblink**
The PETTLEP model

4.10 Affirmations

Ongoing psychological techniques

That's a goal!

By the end of Section 4.10, you should be able to:

→ **define** what is meant by the term affirmations

→ **explain** how affirmation techniques can optimise performance.

affirmations
positive statements that are directly related to an athlete's qualities, abilities or goals

Affirmations are used by many athletes to increase confidence and motivation in order to improve performance. Affirmations are positive statements that are directly related to an athlete's qualities, abilities or goals. They are designed to help train an athlete's brain into believing that they possess the skills, abilities, attitudes and beliefs necessary to achieve whatever goal (or goals) they have set for themselves.

Affirmations are an ongoing psychological technique, meaning that they can be applied at any time during or between training and performance. Athletes need to continually practise creating and using affirmations in order to optimise their performance.

SOURCE 1 Positive self-talk and affirmations can improve an athlete's performance.

Using affirmations effectively

In the lead up to any training session or sporting event, it is common for feelings of doubt and anxiety to enter an athlete's mind. An athlete who regularly practices affirmations will become better at countering these negative thoughts and emotions in order to boost their confidence.

Many sport psychologists agree that the most effective affirmations are:

- written as a statement of fact rather than a wish or a hope (e.g. 'I am a natural born runner.')
- written in the first person (e.g. 'I can stay focused and strong.')
- written in the present tense (e.g. 'I love taking shots under pressure.')
- positive (e.g. 'I am a skilled player.')
- specific (e.g. 'My serve is powerful and lands first time.')

Some sport psychologists suggest that athletes take note of any negative thoughts that arise during training or competition and write six to ten inspirational affirmations to counter each one. These affirmations can be about specific skills or about the individual generally. Athletes should say these affirmations out loud and with conviction to themselves in a mirror or to a trusted friend or trainer. Displaying notes or posters with written affirmations is also beneficial.

The most famous advocate for the use of affirmations was US professional boxer and activist Muhammad Ali. Widely acknowledged as one of the greatest athletes in history, Ali told himself 'I am the greatest' so many times that even his opponents became convinced of it. Ali was also famously quoted as saying: 'It's the repetition of affirmations that leads to belief. And once that belief becomes a deep conviction, things begin to happen.'

SOURCE 2 Muhammad Ali was famously quoted as saying: 'I am the greatest. I said that even before I knew I was.' This is an example of an affirmation.

4.10 Check your learning

Engage and understand

1 In your own words, **explain** what an affirmation is.
2 **Describe** five characteristics of an effective affirmation.

Analyse and apply

3 **Reflect on** a time you had a negative thought about your sporting performance.
   a **Describe** the negative thought.
   b **Apply** the five characteristics of effective affirmations to create five new affirmations to counter the negative thought. Practise saying the affirmations aloud so you can redirect this negative thought into a positive one.

Evaluate and justify

4 **Conduct** some online research about the life and sporting career of Muhammad Ali.
   a **Assess** the role that affirmations played in the sporting and personal success of Ali.
   b **Discuss** five affirmations Ali used. **Justify** which affirmation resonates with you.

Check your obook assess for the following additional resources and more:

» **Student book questions**
4.10 Check your learning

» **Video weblink**
Affirmations: Interview with Muhammad Ali

» **Weblink**
Using affirmations effectively

4.11 Team dynamics and cohesion techniques

Ongoing psychological techniques

That's a goal!

By the end of Section 4.11, you should be able to:

→ **identify** and **define** a range of team dynamics and cohesion techniques (i.e. leadership, communication, norms, rules and discipline)

→ **explain** how team dynamics and cohesion techniques can optimise performance.

SOURCE 1 Team dynamics and cohesion techniques help individual members of a team work together as a unified whole.

Team dynamics and cohesion techniques include a range of different strategies and skills designed to help the individual members of a team:

- develop strong relationships
- establish clear roles and expressions
- maintain high levels of communication

so that they can work together and function as a unified whole.

Team dynamics and cohesion techniques should be applied continuously during training and performance.

Athletes need to develop, evaluate and revise their goals on a regular basis in order to optimise their performance.

In Section 4.6, we discussed the Tuckman's Stages of Group Development – a theory designed to explain the stages that teams go through in order to achieve cohision. At each stage of team development, there are important strategies athletes need to work through to optimise the cohesion of their team. A good coach will play an important role in implementing and facilitating these strategies. It is crucial, especially in the forming and storming stages, that the coach is open and available to hear and meet the needs of the individuals within the team. To ensure all members are motivated and driven, a coach must ensure that each individual is having their need for autonomy, competence and relatedness met (as discussed in Section 4.4). This will enable each athlete to contribute more and better accept their teammates' contributions.

Techniques for improving team dynamics and cohesion

There are many different aspects to team dynamics and cohesion, and therefore many different strategies and techniques for improving the cohesion of teams. It is therefore helpful to organise individual techniques into four broad categories based on their purpose. These are:

- techniques for establishing group goals and vision
- techniques for establishing group roles (including leadership)
- techniques for establishing group norms (including rules and discipline)
- techniques for building team identity
- techniques for improving communication.

Techniques for establishing group goals and vision

When everyone shares the same goals and vision, it not only fosters support and harmony within the group but it also motivates individuals within the team to work hard for the good of the team.

Goals should be:

- made in consultation with the whole team
- pertain to things other than just outcomes
- guided by the SMARTER principles (see page 222)
- written down and reviewed regularly.

Vision statements are short sentences or collections of words that capture the essence of the team's group goals. Vision statements should be:

- short
- memorable
- unique to the team.
- motivating
- related to the team goals

SOURCE 2 Rowing is an example of a team sport that requires a lot of team cohesion and cooperation.

Techniques for establishing group roles (including leadership)

When every player is aware of their role and the roles of others, they feel a greater sense of competence and relatedness to their teammates. In establishing group roles, it is important that:

- they are clearly communicated during the forming stage of team development. This clearly includes identifying leaders and people with the authority to make decisions on behalf of the group.
- they are made in consultation with the team
- each role has a description
- they are revised, as required.

Techniques for establishing group norms (including rules and discipline)

Group norms are rules, expectations and disciplinary guidelines set out for all members of the team to follow. Group norms should be:

- established by the coach (sometimes in consultation with some or all members of the team)
- communicated in full
- tailored to the goals and needs of the team
- revised when issues inevitably arise.

It is important that rules are established to ensure individuals within teams are clear on what is expected of them. Making the expectations of team members explicit lessens the potential for emotional stress. Players are often required to sign an agreement to uphold the team rules.

Rules may address the following issues:

- punctuality for games and training
- the dress code for games and training
- social media use
- anti-social behaviours in and out of the sporting arena.

Discipline for breaches of the rules should also be clearly communicated to the team.

Techniques for building team identity

Building a shared team identity is a useful strategy for improving team cohesion. There are many ways in which to build team identity, including:

- creating a team name and logo
- creating a team song and mascot
- creating unique team rituals (e.g. special hand slaps during breaks in play, team chants, and pre- and post-match routines such as a warm up and cool down).

All of these individual elements combine to help create bonds and feelings of belonging and shared identity within the group.

Techniques for improving communication

Communication is a key factor in creating harmony. A team needs an environment in which all members are encouraged to contribute their ideas and have their opinions and suggestions listened to. If communication is not effective, team officials might create a system for communication.

FOR THE RECORD!

The Australian Rugby Union team mascot is called Wally. Team tradition requires the youngest member of the squad to protect and care for Wally while on tour. They must place Wally on the sideline during Tests (facing the way the team is running), take Wally to all functions and ensure Wally is protected from pranks!

4.11 Check your learning

Engage and understand

1 **Identify** four strategies or techniques designed to improve team cohesion.

2 **Explain** why a shared team identity is important. Describe some common strategies used to build team identity.

Analyse and apply

3 Think of your physical education class as a team. **Reflect on** the development of your team since the start of the year.

- **a** **Identify** Tuckman's Stages of Group Development and discuss the reasons for your answer.
- **b** **Identify** any problems you have encountered as a group.
- **c** **Consider** which of the team building strategies suggested here that you have and have not adopted.

Evaluate and justify

4 Communication is a key factor in ensuring a positive team dynamic. **Justify** whether or not you agree with this statement.

5 **Reflect on** a time when you were part of an unsuccessful or dysfunctional team.

- **a** In your view, what made the team unsuccessful or dysfunctional?
- **b** What strategies or techniques could have been applied to improve team cohesion?

6 **Discuss** who should have the greatest say when establishing group norms – the coach or the players. Give reasons for your response.

7 'Leadership roles in junior sport should be rotated and shared equally between all team members.' **Critique** this statement and **justify** your response. Conduct additional research online to build your argument.

Check your obook assess for the following additional resources and more:

- » Student book questions
  4.11 Check your learning
- » Video weblink
  Techniques for improving team dynamics
- » Weblink
  Team dynamics and cohesion

4.12 Pre-competition routines

Pre-performance psychological techniques

That's a goal!

By the end of Section 4.12, you should be able to:

→ **identify** and **define** a range of pre-competition routines (i.e. pre-performance techniques and checklists, and pre-event cues such as technical points, triggers and competition segments)

→ **explain** how pre-competition routines can optimise performance.

pre-competition routines
a sequence of actions and/or thoughts that an athlete follows just prior to performance or competition

Pre-competition routines (also known as pre-performance techniques) are used by athletes to optimise their mental strength and help get them 'in the zone'. A pre-competition routine is a sequence of actions and/or thoughts (performed in order) that an athlete follows just prior to a performance or competition. Pre-competition routines are specific to individual athletes and sports. They are designed to generate feelings of certainty, familiarity and control, and they help athletes to focus on appropriate cues, combat anxiety and boost confidence.

Pre-competition routines are most commonly used immediately prior to a performance or competition; however, a number of these techniques can also be applied at other times (e.g. during performance). It is ideal for athletes to practise these techniques regularly so that they can apply them effectively whenever necessary.

Designing a pre-competition routine

In the lead up to competition, it is normal for athletes to complete an extensive, sport-specific warm up routine. Great athletes don't just focus on preparing their bodies for competition though; they place equal importance on preparing their minds. And they do this by running through pre-competition routines.

Pre-competition routines differ based on the strengths and weaknesses of a particular athlete, and the demands of their chosen sport. However, there are some common elements of pre-competition routines:

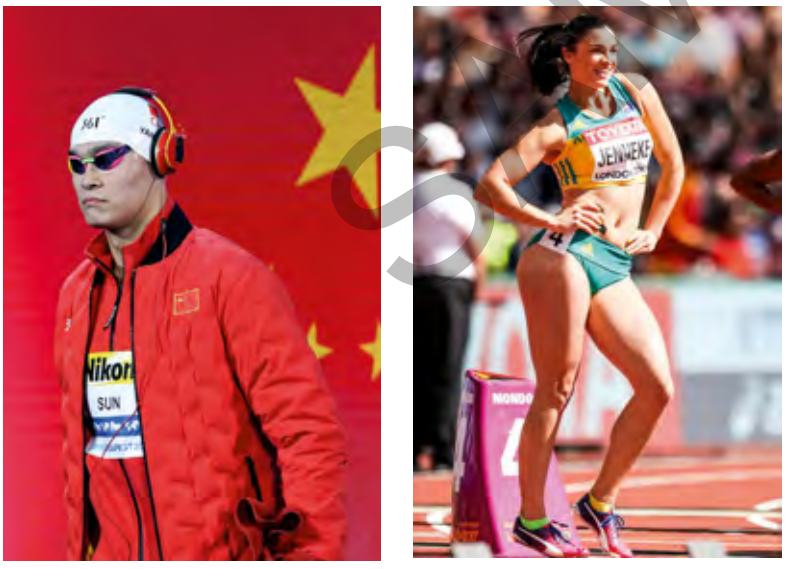
- **Complete a pre-competition checklist** – Checklists might include practicalities such as checking that the requisite equipment and uniform are ready, completing a warm up and taking part in a pre-game briefing. Once the items on the checklist are complete, the athlete can focus on other aspects of their pre-competition routine.
- **Define objectives or goals for the performance** – Having a clearly defined goal for every performance – and reviewing this goal prior to competition – is key to measuring and achieving success.
- **Mentally rehearse the performance or visualise specific aspects of the performance** – Some psychologists suggest rehearsing just the first segment of a competition immediately prior to competition to prevent athletes from becoming overwhelmed with the task ahead. However, it is generally left to individuals to decide the best option for them.

- **Use positive self-talk and affirmations** – In the lead up to performance, athletes need to remind themselves to trust in their skills and know that they have done all they can to optimise their performance. It is important to combat any negative self-doubt by using self-talk and affirmations.
- **Embrace the feelings associated with increased adrenaline release** – The jittery feelings that athletes experience prior to competition are actually helpful. They indicate that the body is getting physically ready for the demands about to be placed on it.
- **Perform rituals** – In sport, a ritual can be defined as a certain behaviour or action that an athlete repeatedly carries out in the belief that it can influence their performance. A ritual may include anything that is meaningful to an athlete. Wearing the same special socks to every game or taking the same route to a big match are some examples of rituals. These can help athletes get themselves mentally ready for their performance, with the familiarity offering them a confidence boost prior to their performance.

Implementing a pre-competition routine

Generally speaking, a pre-competition routine should be carried out 30 to 60 minutes prior to a match. It should take around 10 to 20 minutes to complete.

Some athletes find it best to complete their routine in a quiet space, while others prefer to be around people and noise. Athletes often listen to music while completing their pre-competition routine – some always listen to the same piece of music or artist to provide consistency and familiarity; while others simply wear headphones (without music) to give them the quiet time they need to work through their routines efficiently.



SOURCE 1 Many athletes have a pre-competition routine. Sun Yang listens to music before competing, while Michelle Jenneke gets into the right frame of mind by doing a dance on the starting line.

Australian hurdler Michelle Jenneke (see Source 1) includes dancing in her pre-competition routine. A video of her warm up dance at the starting line of her event went viral after the 2012 World Junior Championships. As she performed well at that meet, she has included the dance before both training and competition ever since. Michelle explains: 'I honestly don't get too nervous about the race. I am more excited than anything else – and the pre-race routine is an outlet for that, [it] gets me into a right frame of mind.'

Theory in action | A case of lucky underwear

Many athletes consider rituals such as wearing their favourite underwear or carrying a lucky charm an important part of their pre-competition routine.

Retired basketball legend Michael Jordan wore his University of North Carolina basketball shorts under his Chicago Bulls uniform in every match he played. He strongly believed that they brought him luck and contributed to his success. To hide his 'lucky' shorts, he wore longer shorts over the top, which started a trend that continues today.

Similarly, tennis legend Serena Williams has several routines to which she attributes her success. She always brings her shower sandals onto court with her, ties her shoelaces in a certain way and wears the same pair of socks for the duration of a tournament. When her performance is off, she will often cite not following one of her routines as the reason.

Some research has shown that rituals provide athletes with a sense of control in an otherwise unknown environment. This can have a positive impact on an athlete's confidence. However, some psychologists dismiss this idea and warn against getting too attached to rituals and superstitions. They claim that rituals are based on luck and give athletes a false sense of confidence.

SOURCE 2 Michael Jordan won six NBA championships wearing the same 'lucky' shorts under his uniform.

4.12 Check your learning

Engage and understand

1 **Identify** the elements considered necessary for an effective pre-competition routine.
2 **Explain** what is meant by 'Embracing the feelings' as part of a pre-competition routine.
3 **Explain** when a pre-competition routine should be taken and how long it should take.

Analyse and apply

4 Read 'A case of lucky underwear', then conduct some additional research into rituals in sport. Based on your research, **reflect on** whether you think rituals are beneficial routines that can have a positive impact on athletes' confidence or inadvisable routines that give athletes a false sense of confidence. Compare examples from your research in a written response of 150 words.

Evaluate and justify

5 **Create** your own pre-competition routine for the sport that is the focus of your study this term.

Check your obook assess for the following additional resources and more:

- **» Student book questions**
  4.12 Check your learning
- **» Video weblink**
  Michelle Jenneke pre-competition dance
- **» Weblink**
  Designing a pre-competition routine
- **» Weblink**
  Michael Jordan's lucky shorts

4.13 Relaxation and energiser techniques

Pre-performance psychological techniques

That's a goal!

By the end of Section 4.13, you should be able to:

→ **identify** and **define** a range of relaxation and energiser techniques (i.e. meditation, progressive muscle relaxation [PMR], deep breathing, music and visualisation)

→ **explain** how relaxation and energiser techniques can optimise performance.

relaxation and energiser techniques
a range of different techniques aimed at optimising athletes' arousal levels

Relaxation and energiser techniques are often used as a way to optimise arousal levels prior to performance. They can also contribute to better concentration, motivation and confidence. These techniques can be adapted to suit the individual needs of athletes and the situation in which they find themselves.

Relaxation and energiser techniques are most commonly used immediately prior to performance or competition. However, a number of these techniques can also be applied in an ongoing sense and/or during performance. It is recommended that athletes practice these techniques regularly so that they can apply them effectively whenever they are required.

Effective relaxation and energiser techniques

Effective relaxation and energiser techniques include:

- meditation
- progressive muscle relaxation (PMR)
- deep breathing
- music
- visualisation.

meditation
the practice of focusing attention on a single point of reference to create calmness and clarity

Meditation

Meditation is the practice of focusing the mind to achieve clarity and a sense of calm by reducing 'noise' or stimulation to the brain. Meditation allows you to turn attention away from distracting thoughts and focus on the present moment. It can involve focusing on breath or bodily sensations, or a word, phrase or image.

Athletes can use meditation to prevent the build-up of pre-competition anxiety. Meditation can also help athletes gain greater control of their emotions and focus during performance. For example, a softball pitcher may experience a natural increase in arousal before a crucial pitch. If the players practised effective meditation beforehand, their strengthened mind–body connection will enable them to resist the heightened external and internal distractions and remain connected to the task in the present. This will in turn allow them to stay more relaxed as a performer.

To be most effective, meditation should initially be practised:

- in a quiet environment
- for 10 to 30 minutes, two to three times a day initially
- with a focus on breathing
- with a clear mind (i.e. without holding onto distracting thoughts).

FOR THE RECORD!

Phil Jackson, former NBA coach of the Chicago Bulls and the Los Angeles Lakers, used to invite all his players into a meditation circle before important playoff games to help players focus on the task and ensure they were mentally present. Over his nine seasons as coach of the Chicago Bulls, Chicago won the NBA championships six times.

Progressive muscle relaxation (PMR)

Progressive muscle relaxation (PMR) is a popular relaxation technique used by athletes. It involves the systematic tensing and releasing of muscles, which is beneficial to athletes both before and after a sporting performance. PMR can reduce respiration, blood pressure, muscle tension and negative thoughts. An athlete who engages in PMR regularly can manage anxiety better and their performance is therefore optimised.

progressive muscle relaxation (PMR)
a stress-relief technique that involves the systematic tensing and relaxing of particular muscle groups in the body

To be effective, it is recommended that athletes spend 10 minutes engaging in PMR in the quiet of their home before and after competitions, at least two to three times each week. Athletes lie on the floor and progressively tense and then relax particular muscle groups. Starting with the arms, the athlete can make a fist and tighten the arm muscles for approximately 5 seconds and then relax for 30 seconds. Repeating this several times will help athletes become more familiar with the sensations and feedback from the muscles. The same can be done for the neck, face, shoulders and upper back and then the lower back and abdominals, as well as the legs and hips. To finish, athletes tense their whole body and then relax completely.

With practice, athletes will be able to relax the muscles without tensing them first; sometimes a cue word is enough to produce the feeling of relaxation. This technique is particularly useful for neck and shoulder tension, tension headaches and tight jaw muscles.

SOURCE 1 Practising progressive muscle relaxation (PMR) prior to a performance can induce feelings of relaxed energy.

Deep breathing

Deep breathing is an important relaxation technique that is often performed in conjunction with meditation and PMR but it is also effective on its own.

Practising effective deep breathing techniques prior to a performance can help decrease stress and muscle tension, calm nerves and reduce negative or unhelpful thoughts; it can induce feelings of relaxed energy.

To practise deep breathing:

- Sit or lie in a relaxed position with bent knees.
- Relax your shoulders.
- Place your dominant hand just below your navel and your other hand just above it.
- Breathe deeply through your nose, filling the area under your dominant hand with air first, then the area under your other hand (lower rib cage) and finally the upper portion of your lungs.
- Exhale slowly, squeezing your belly, pushing the air out.
- Focus on each inhalation and exhalation.
- Repeat for 10 minutes.

Music

Music is a powerful tool for both increasing and decreasing athletes' arousal levels before training or competition. The effect of music differs from athlete to athlete.

Prior to performance, it is more common for athletes to listen to music with a fast beat – this type of music generally increases arousal levels.

SOURCE 2 Athletes use relaxation and energiser techniques such as deep breathing and listening to music to prepare for performances.

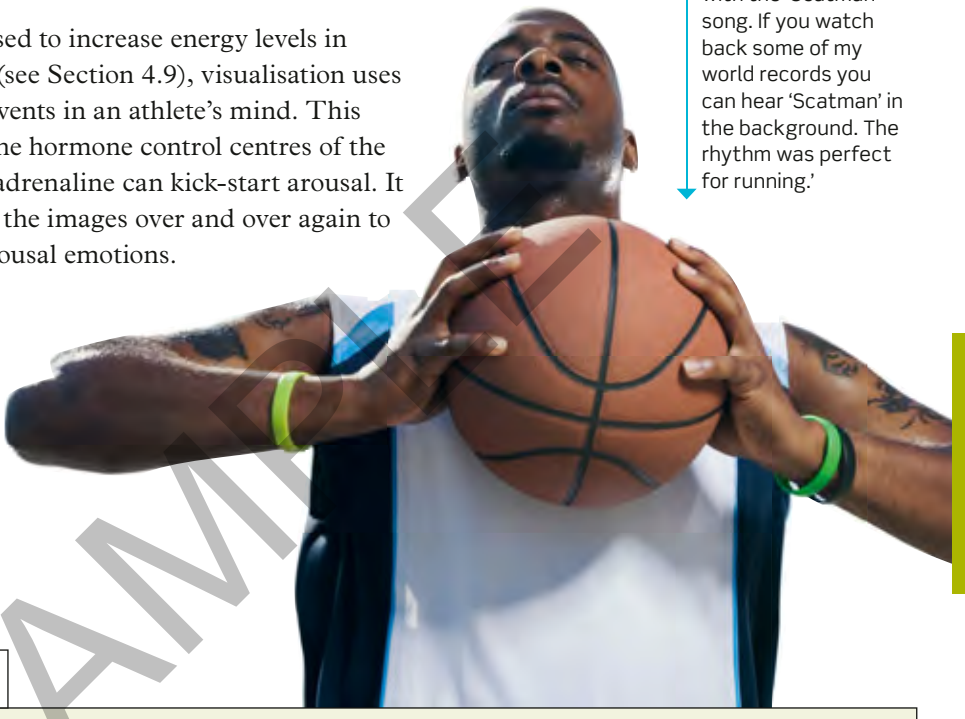
However, some athletes respond well to relaxation music (such as nature sounds like whales or water) or the mellow tunes of their favourite artist prior to performance.

The Brunel Music Rating Inventory

The Brunel Music Rating Inventory was created by sport psychologist Costas Karageorghis to help athletes choose the ideal music to listen to as part of their pre-performance routine. One of the most important elements of Karageorghis' research was that a song's tempo (i.e. speed) should be between 120 and 140 beats per minute (BPM) for optimum arousal. That pace coincides with the range of most commercial dance music and rock songs.

Visualisation

Visualisation is another technique used to increase energy levels in athletes. A type of mental rehearsal (see Section 4.9), visualisation uses mental imagery to create powerful events in an athlete's mind. This can 'trick' the body into activating the hormone control centres of the brain and the subsequent release of adrenaline can kick-start arousal. It is recommended that athletes repeat the images over and over again to flood the mind with the powerful arousal emotions.



SOURCE 3 Visualisation creates powerful events in an athlete's mind. A basketball player might visualise the sweetest point they ever scored and the subsequent celebration of this basket.

FOR THE RECORD!

Haile Gebrselassie, a retired long-distance runner and Olympic gold medallist, often requested that the 90s hit 'Scatman' (with a BPM of around 135) be played during his events. Gebrselassie says: 'I did many records with the 'Scatman' song. If you watch back some of my world records you can hear 'Scatman' in the background. The rhythm was perfect for running.'

4.13 Check your learning

Engage and understand

1 In your own words, **explain** how meditation can help an athlete to control their anxiety.

2 True or false? To be most effective, athletes should practise meditation two to three times a day initially. **Explain** your response.

Analyse and apply

3 **Analyse** PMR and deep breathing techniques. **Reflect on** which technique would have the greatest impact on optimising your arousal levels prior to performance.

4 **Compare** and **contrast** the types of music that increase athletes' arousal levels and the types of music that decrease arousal levels.

Evaluate and justify

5 'Music with a tempo of 120 to 140 BPM will optimise arousal levels for all athletes.'

Do you agree or disagree with this statement? **Justify** your response, using examples.

Check your obook assess for the following additional resources and more:

- **Student book questions**
  4.13 Check your learning
- **Video weblink**
  Progressive muscle relaxation training
- **Weblink**
  The benefits of visualisation
- **Weblink**
  The benefits of deep breathing

4.14 Positive self-talk techniques

In-performance psychological techniques

That's a goal!

By the end of Section 4.14, you should be able to:

→ **identify** and **define** a range of positive self-talk techniques (i.e. positive self-talk, positive cue words, trigger words and positive emotions)

→ **explain** how self-talk techniques can optimise performance.

positive self-talk
saying encouraging and motivating messages to yourself

Positive self-talk techniques are known to increase feelings of confidence and motivation, optimise arousal and improve concentration. They can have a significant impact on the performance of athletes. Positive self-talk is the practice of saying encouraging and motivating messages to yourself, either silently or out loud.

Positive self-talk techniques are most commonly used during performance or competition. However, a number of these techniques can also be applied in an ongoing sense and/or immediately prior to performance. It is recommended that athletes practise these techniques regularly so that they can apply them effectively whenever they are required.

Effective positive self-talk techniques

self-talk
words and thoughts directed towards yourself

negative self-talk
saying negative comments to yourself

Self-talk consists of the words and thoughts that athletes direct towards themselves. Self-talk can be positive or negative. It is linked strongly to an athlete's core self-belief and motivation.

When self-belief is low, an athlete is more likely to engage in **negative self-talk,** with comments such as 'I'm just hopeless!', 'This will be a double fault' or 'You're never going to win!' They are also more likely to see strong emotions as negative threats rather than positive challenges. However, an athlete who chooses to use positive self-talk can help to shift the negative self-beliefs they may have learned over time.

SOURCE 1 Sally Pearson has often publically spoken about the impact positive self-talk had on her career as an elite hurdler.

Effective positive self-talk techniques and skills include the use of:

- positive cue words
- trigger words
- positive emotions.

Positive cue words

Positive cue words are one component of positive self-talk. Positive cue words are single words or short statements (see Source 2) that athletes can say to themselves to help refocus their attention and combat negative thoughts or emotions that would otherwise distract them and negatively affect their performance. Positive cue words can lift players out of low moods during competition and bring them back to the present moment.

positive cue words
single words or short statements to help refocus attention and combat negative thoughts or emotions

The use of positive cue words not only helps athletes to focus but also elicits positive emotional feelings for the athletes in the game. For example, a basketball player might shout out 'STTE!' (strong to the end) to encourage their teammates not to give up and to play with confidence, even when defeat looks inevitable.

Athletes can often be seen talking to themselves throughout their performance. During the televised coverage of the 2016 Rio Olympic Games, US gymnastics gold medallist Laurie Hernandez could be seen whispering to herself: 'I got this.'

Positive cue words should be:

- short and clear
- relevant and meaningful to the individual athlete
- repeated regularly during training so they can be instantly called upon during competition
- written out and displayed in various prominent places.

Mental state	Examples of positive cue words
Over-arousal (e.g. anxiety or panic)	Calm down Relax Easy Relax and breathe Calm, confident, in control
Under-arousal (e.g. wakefulness or boredom)	Go for it Drive hard Get in the game Get after it
Distraction or lack of focus	Eye on the ball Focus Keep it simple Focus on every play Stay in the game
Low confidence	You've got this You can do this Ball is going in the hoop Reach my full potential Dig deep Dominate

SOURCE 2 Positive cue words can motivate athletes to work hard and give them confidence to meet their potential.

Theory in action | Why do tennis players talk to themselves?

Tennis players are renowned for using a range of self-talk techniques. Singles tennis is an individual sport, rare in that it is one of only a few sports where you can score more points than your opponent and still lose the match. There are many mind games players have to work through as they experience both wins and losses at crucial stages of each match. Unlike many other sports, tennis players are banned from receiving support and guidance from their coaches during the match. Therefore, the onus is on the players to coach themselves through the difficult periods of a match.

Makis Chamalidis, a psychologist with the French Tennis Federation, explains: 'After each point, you have 20 to 25 seconds where there isn't much happening. It's quite normal to talk to yourself then. You have things to deal with, you need to analyse what happened or evacuate your frustration. There are no such breaks in other sports, or an external person like a coach.'

Performance psychologist Dr Melissa Weinberg explains that while it appears that only some tennis players are self-talkers, in reality even the seemingly quiet players use self-talk – they just do it more covertly.

Roger Federer, who is renowned for his quiet mental strength during matches, admitted in a post-match interview at the 2017 Australian Open that he was talking to himself internally after losing a crucial fourth set against Stan Wawrinka: '... in the fifth set ... I was talking to myself in my head, saying "Just relax, man. The comeback is so great already. Let it fly off your racquet and just see what happens."'

Unlike Federer, other tennis players such as Andy Murray and Serena Williams talk aloud to themselves during matches. For these players, the act of speaking the words aloud is more effective. It also makes it easier for spectators to figure out what's on their mind!

SOURCE 3 Roger Federer is renowned for his composed demeanour on the court, but he admits to using self-talk techniques to keep himself motivated.

Trigger words

Trigger words are used by athletes to focus their attention on a specific task during or before the completion of a skill. This self-talk technique is often linked to specific instructions or cues athletes have been given by their coaches. For example, a sprinter might use trigger words such as 'posture', 'knees' or 'drive with the elbows'. In essence, these words serve as reminders for what to do. For example, Professional golfer and former world number one Rory McIlroy uses the words 'process' and 'spot' to keep himself focused. He reminds himself to focus on the process rather than the outcome, and uses 'spot' to help him pick a spot while putting. He has won many majors using this aspect of positive self-talk.

trigger words
words or short statements used to focus attention on a specific task during or before the completion of a skill

Positive emotions

Positive emotions are an important aspect of an athletes' sporting experience. Positive emotions build stronger self-belief, which in turn contributes to more positive emotional experiences. The athlete who draws on positive emotions can rise above slumps in their performance and use a **growth mindset** to avoid succumbing to the negative emotions that naturally arise during low points in competition. With a growth mindset, an athlete sees dips in their performance as interesting challenges that they have control over. This can transform feelings of frustration or anger into excitement and hope. Experiencing sport as an enjoyable challenge is highly motivating and has a positive effect on an athlete's confidence.

positive emotions
emotions that create an uplifting effect

growth mindset
a belief that one's own abilities can be developed through hard work

4.14 Check your learning

Engage and understand

1 Using examples from the text, **describe** why self-talk is more than simply having a chat with yourself.

2 **Identify** a positive cue word (or statement) that could assist an athlete in each of the following mental states:
- **a** over-arousal
- **b** under-arousal
- **c** distraction or lack of focus
- **d** low confidence.

Analyse and apply

3 **Differentiate** between positive cue words and trigger words by making a list of key points.

4 Read 'Why do tennis players talk to themselves?' This article mentions two methods of self-talk: internal (spoken in your head) and external (spoken aloud). Use a PMI analysis framework to identify the strengths and weaknesses of both methods (an example is provided in your obook assess). Use it to **determine** which method would work best for you.

Evaluate and justify

5 **Create** a set of four positive cue words or phrases that you can use during this unit. **Justify** your choice of words.

6 Kayla and Lizzie are playing in their high school basketball final. Neither of them has played well in the first half of the game. Kayla feels defeated and, each time she misses a shot, she mutters to herself: 'See? You're just hopeless at basketball!' She thinks she should probably quit the team. Lizzie is also upset that she isn't playing well but after missing a shot, she shouts to herself: 'Come on. You can do better than that! You've got this. Focus!' Lizzie feels she is in a slump and decides to push herself to work hard and get back in the game. From a sport psychology perspective, **discuss** the difference between the players' reactions to their poor performance. **Justify** which athlete is more likely to experience success in the second half of the match.

Check your obook assess for the following additional resources and more:

- **» Student book questions**
  4.14 Check your learning
- **» Video weblink**
  The importance of positive self-talk
- **» Weblink**
  Positive cue words
- **» Weblink**
  Trigger words

4.15 Pre-task routines

In-performance psychological techniques

That's a goal!

By the end of Section 4.15, you should be able to:

→ **identify** and **define** a range of pre-task routines (i.e. taking a deep breath; focusing on a cue word; having temporal consistency; performing a set of steps in a specific order)

→ **explain** how pre-task routines can optimise performance.

Pre-task routines (also known as pre-performance routines) are actions performed by athletes immediately prior to performing a task within a performance (i.e. a closed skill such as a serve, a free kick or a pitch). Pre-task routines can help an athlete steady their mind and take control of their performance before they execute the skill. Pre-task routines can also help athletes to increase their concentration under pressure.

Pre-task routines are an in-performance psychological technique, meaning that they are most effective when applied during an activity or performance but like most psychological techniques, it is important to develop and practise pre-task routines outside of performance times. Many sport psychologists – and athletes – would argue that the pre-task routine is just as important as the task itself!

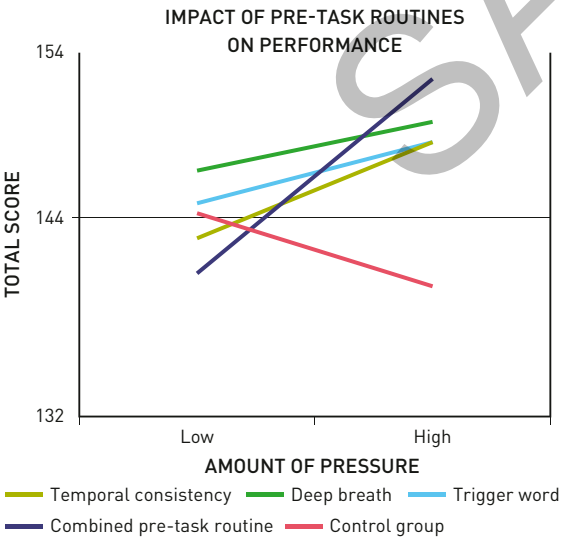
Effective pre-task routines

The ability to perform successfully under pressure is a crucial aspect of sport performance. Effective pre-task routines can help athletes improve their overall performance and reduce the risk of choking under pressure.

The Mesagno and Mullane-Grant experiment

In 2010, Australian sport scientists Christopher Mesagno and Thomas Mullane-Grant conducted an experiment to assess the effectiveness of incorporating pre-task routines into pressured performances. A group of 60 skilled soccer players were placed into five equally sized groups. Four of the groups were assigned a different pre-task routine to perform in the same way before each kick. The fifth group was a control group that received no pre-task routine. The pre-task routines were:

- Group 1: taking a deep breath
- Group 2: focusing on a trigger word
- Group 3: having temporal consistency (e.g. performing a countdown before executing the skill)
- Group 4: performing a combined pre-task routine (i.e. combining all of the routines above in a specific sequence as well as adding a physical action (e.g. tapping a boot twice before kicking) is desired.



SOURCE 1 The Mesagno and Mullane-Grant experiment reveals the importance and effectiveness of pre-task routines.

Participants in each group were asked to kick 20 balls into a goal, firstly, under low pressure (i.e. no consequences for success or failure) and, secondly, under high pressure (i.e. in front of an audience and with cash prize for the highest score).

Source 1 shows that when the results of the four pre-task groups were compared against the control group:

- the performances of the players in the four pre-task groups increased under high pressure when compared to the control group
- the most significant increase in performance was experienced by athletes who performed the extensive pre-task routine
- the performance of the players in the control group (with no pre-task routine) decreased under pressure.

The experiment indicated that these types of pre-task routines are effective in helping players manage their arousal and concentration levels before completing closed skills. It also highlighted that the use of an extensive pre-task routine is highly beneficial.

SOURCE 2 Jonny Wilkinson uses an extensive pre-task routine for goal kicking. After lining the ball up, he takes 4 steps away from the ball, one deep breath and relaxes his shoulders, 5 steps towards the try line, clasps his hands, stares at the goal and then kicks.

Tips for establishing an effective pre-task routine

- Choose actions that mimic (or are part of) the task you must complete – e.g. if your task is driving a golf ball, then the pre-task routine might be standing two steps back and practising the swing.
- Keep the routine short, with consistent timing between each step – e.g. take 5 seconds between each practice swing and the actual task.
- Include a breathing rhythm and a trigger word.
- Practise and refine the routine until it becomes habitual.

PERFORMANCE | SKILL DRILL 4.15 | Determine the impact of pre-task routines on performance

>> Turn to pages 348–349 to complete this integrated physical performance activity.

4.15 Check your learning

Engage and understand

1 **Explain** the purpose of pre-task routines.

2 **Summarise** the findings of the Mesagno and Mullane-Grant experiment. What conclusion did they draw about the effectiveness of pre-task routines?

Analyse and apply

3 Based on the results of the Mesagno and Mullane-Grant experiment, **consider** what inferences can be made about the impact of pre-task routines on the mental state of athletes during performance.

4 **Compare** and **contrast** the types of pre-task routines commonly carried out by tennis players prior to serving and rugby players prior to kicking for goal. **Consider** things such as the consistency, timing and scope of the routines.

Evaluate and justify

5 a **Design** a pre-task routine.

b **Predict** whether you think your pre-task routine will be successful.

c **Justify** your prediction based on statistics.

Check your obook assess for the following additional resources and more:

- **» Student book questions** 4.15 Check your learning
- **» Skill Drill worksheet** Determine the impact of pre-task routines on performance
- **» Video weblink** How routines help athletes get consistent results
- **» Weblink** The Mesagno and Mullane-Grant experiment

4.16 Breathing techniques

In-performance psychological techniques

That's a goal!

By the end of Section 4.16, you should be able to:

→ **identify** and **define** a range of breathing techniques (i.e. deep breathing)

→ **explain** how breathing techniques can optimise performance.

breathing techniques
any form of breathing exercise in which an athlete consciously regulates their breathing to stimulate a desired response

Breathing techniques have been proven to help athletes relax their bodies and minds, increase focus and ultimately contribute to better performance. They include any form of breathing exercise in which an athlete consciously regulates their breathing (by controlling the rate and depth of their breaths) in order to stimulate a desired response.

When breathing is performed in a deep rhythmic pattern (often referred to as diaphragmatic breathing), the 'primitive' parts of the brain that control the fight or flight response are given a signal that the threat of danger has passed.

Effective breathing techniques

Breathing techniques are effective when applied during an activity or performance but, like many psychological techniques, athletes need to practise and perfect them. Effective breathing techniques include deep breathing (see Section 4.13), as well as those that are intended to have specific effects on the athlete's body (such as those shown in Source 2).

Technique	Method	Effect
4–7–8	→ Inhale deeply for 4 seconds → Hold breath for 7 seconds → Exhale for 8 seconds	→ Calms the athlete quickly in a high-pressure moment.
6–2–8	→ Inhale deeply for 6 seconds → Hold breath for 2 seconds → Exhale for 8 seconds	→ The short hold refreshes the nervous system and refocuses the athlete.
Measured breathing	→ Customised to the athlete → Inhale and exhale for the same count (e.g. 5 in and 5 out) → No breath holding	→ The rhythm encourages relaxation and focus.

SOURCE 1 Athletes who can master their breathing tend to perform better.

4.16 Check your learning

Engage and understand

1 In your own words, **explain** the benefits of deep breathing techniques.

Analyse and apply

2 **Compare and contrast** the three deep breathing techniques provided in Source 2. **Consider** which techniques you think would be most beneficial to you as an athlete. Why?

Check your obook assess for the following additional resources and more:

» Student book questions
4.16 Check your learning

» Video weblink
Effective breathing techniques

» Weblink
How breathing techniques help athletes perform

4.17 Performance segmenting

In-performance psychological techniques

That's a goal!

By the end of Section 4.17, you should be able to:

→ **define** the technique of performance segmenting

→ **explain** how performance segmenting can optimise performance.

performance segmenting
the process of breaking up a performance into more manageable periods in one's mind

Performance segmenting is the process of breaking up extended periods of training or competition into smaller, more manageable periods of time (known as segments). Each segment should be short enough for the athlete to totally focus on what needs to be done during that period. Performance segmenting is designed to help athletes stay confident and motivated, and to focus their attention and concentration.

Performance segmenting is an in-performance psychological technique, meaning that it is most effective when applied during an activity or performance.

FOR THE RECORD!

Australian cricket player Steve Smith has been a successful performance segmenter since his early days playing the sport. His junior coaches and teammates claim that he would regularly steer his team to victory by 'winning' one over at a time. After each over, he would yell out from the crease: 'What's our run rate now?'

Effective performance segmenting

A sporting event that takes place over a long period of time can be overwhelming for the players or athletes taking part in it – think of a marathon runner at the start of an event or a cricket player at the start of a run chase. If an athlete performs below expectations in the early stages of an event, feelings of panic and anxiety can set in and influence the outcome of the entire event. Effective performance segmenting aims to prevent this from happening. By dividing an event up into segments, athletes can narrow their focus and fully concentrate on the demands of that smaller period of play or activity.

There are no set rules on how short or long each segment should be, as this will depend on the individual and the sport or physical activity. The marathon runner might break his event into 10 km sections while the cricket player embarking on an Ashes series will likely think of one game at a time. They may even break it down further into days, innings or sessions.

4.17 Check your learning

Engage and understand

1 **Summarise** the concept of performance segmenting.

Analyse and apply

2 The phrase 'play one hole at a time' describes the concept of performance segmenting. **Consider** the activity you are currently studying and **assess** the opportunities for performance segmenting.

Evaluate and justify

3 Australian cricketer Steve Smith is a master of performance segmenting. Conduct some online research to identify two other Australian sporting identities that use performance segmenting. **Compare** the data you have collected and **analyse** how it has helped these athletes to optimise their performance. Provide one or more credible source to support your answer.

Check your obook assess for the following additional resources and more:

» **Student book questions**
4.17 Check your learning

» **Weblink**
Effective performance segmenting

CHAPTER 4 REVIEW

Sum it up!

4.1 **Sport psychology** is a field of science that investigates how an athlete's mental processes influence their participation and performance in sport and physical activity. It aims to assist athletes to achieve optimum mental health and improve performance.

4.2 **Motivation** refers to the drive within us to behave in a particular way to achieve our goals. There are two types of motivation: **extrinsic motivation** and **intrinsic motivation**.

4.3 **Confidence** is the belief that a person can have faith in (or rely on) themselves, someone or something. An athlete's overall level of confidence is made up of three factors: **self-confidence, self-belief** and **self-efficacy**.

4.4 **Arousal** is a feeling of mental and physical alertness or excitement.

4.5 **Attention** is the ability of an athlete to respond to specific internal and external stimuli during training and competition. **Concentration** is the everyday term used to describe how a person focuses their mental energy.

4.6 **Team dynamics** describes the relationships between all of the different members of a group. **Team cohesion** is the extent to which individual members of a team can work together as a unified whole. There are **four distinct stages** teams go through to reach cohesion: **forming**, **storming**, **norming** and **performing**.

4.7 There are many psychological techniques athletes can use to optimise performance. These techniques can be: **ongoing**, **pre-performance** and **in-performance**.

4.8 **Goal setting** is used to identify things you want to achieve and to establish measures to track progress. There are three types of goals: outcome goals, performance goals, process goals. The **SMARTER** principle is a popular technique for developing realistic and achievable goals

4.9 **Mental rehearsal** is a technique used by athletes to develop skills, reduce anxiety, increase confidence and concentration, and ultimately improve performance.

4.10 **Affirmations** are positive statements designed to help train an athlete's brain into believing that they possess the skills, abilities, attitudes and beliefs necessary to achieve whatever goal they have set.

4.11 **Team dynamics** and **cohesion techniques** help the individual members of a team develop strong relationships, establish clear roles and expectations, and maintain high levels of communication so that they can work together and function as a unified whole.

4.12 **Pre-competition routines** are sequences of actions and/or thoughts (performed in order) that an athlete follows just prior to an event or competition.

4.13 **Relaxation and energiser techniques** are used to optimise arousal levels prior to performance. They include: **meditation**, **progressive muscle relaxation (PMR)**, **visualisation** and **breathing techniques**.

4.14 Positive self-talk techniques are known to increase feelings of confidence and motivation, optimise arousal and improve concentration. Positive self-talk techniques include: positive cue words, trigger words, positive emotions.

4.15 **Pre-task routines** are actions performed by athletes immediately prior to performing a task (i.e. a closed skill such as a serve, a free kick or a pitch) within a performance.

4.16 **Breathing techniques** include any form of breathing exercise in which an athlete consciously regulates their breathing (by controlling the rate and depth of their breaths) in order to stimulate a desired response (e.g. relaxation and/or focus).

4.17 **Performance segmenting** is the process of breaking up extended periods of training or competition into smaller, more manageable pieces (known as segments).

Dig deeper!

Exam-style revision questions and tasks

SECTION A

→ Ten multiple-choice questions

QUESTION 1

The main objective of sport psychology is

(A) to positively affect an opponent's performance.
(B) to increase the chance of optimum performance.
(C) to assist athletes to achieve optimum mental health and improve performance.
(D) to assist athletes to achieve optimum mental health and guarantee optimum performance.

QUESTION 2

Motivation is

(A) a general desire, need or want that drives a person to behave in a particular way.
(B) a belief that a person can have faith in (or rely on) themselves, someone or something.
(C) the level of focus and attentiveness a person dedicates to a task or stimulus.
(D) the relationships between members of a group of people (who are working together to achieve a common goal).

QUESTION 3

Arousal is

(A) a general desire, need or want that drives a person to behave in a particular way.
(B) a belief that a person can have faith in (or rely on) themselves, someone or something.
(C) the level of focus and attentiveness a person dedicates to a task or stimulus.
(D) the relationships between members of a group of people (who are working together to achieve a common goal).

QUESTION 4

Which of the following can be catogorised as types of goals?

(A) Outcome
(B) Performance
(C) Achievement
(D) Process

QUESTION 5

Extrinsic motivation is

(A) a type of motivation driven by internal factors.
(B) a type of motivation driven by external factors.
(C) a type of amotivation.
(D) at the lower end of the motivation continuum.

QUESTION 6

An athlete's overall confidence is made up of

(A) self-confidence, self-belief and self-respect.
(B) self-confidence, self-belief and self-efficacy.
(C) self-belief, self-efficacy and self-esteem.
(D) self-belief, self-efficacy and resilience.

QUESTION 7

Progressive muscle relaxation (PMR) is a popular technique used by athletes to

(A) reduce respiration, core body temperature, perspiration and negative thoughts.
(B) reduce respiration, core body temperature, perspiration and positive thoughts.
(C) reduce respiration, blood pressure, muscle tension and core body temperature.
(D) reduce respiration, blood pressure, muscle tension and negative thoughts.

QUESTION 8

According to Nideffer's Attentional Model, attention exists in two dimensions:

(A) direction and width.
(B) length and width.
(C) intrinsic and extrinsic.
(D) broad and narrow.

QUESTION 9

_____ is the strategy that allows an athlete to maintain concentration and focus by breaking up a performance into manageable sections.

(A) Body movement segmenting
(B) Performance segmenting
(C) Progressive muscle relaxation
(D) Pre-task routines

QUESTION 10

According to Tuckman's Stages of Group Development, group norms should be developed during the _____ stage.

(A) forming
(B) storming
(C) norming
(D) performing

SECTION B

→ Two short-response questions
→ One extended written response question

QUESTION 11 (150 words)

Goal setting is a technique used to help athletes identify things they want to achieve and establish measures to monitor and track progress.

a Identify the three main types of goals and compare each one using examples to support your answer.

b The SMARTER principle is often used to help athletes generate effective goals. Write a goal that incorporates aspects included in the SMARTER principle.

QUESTION 12 (150 words)

During a match, a tennis player can be heard saying 'I love taking shots under pressure.'

a Identity what psychological technique is being used here.

b Explain how this psychological technique is used by athletes to increase confidence and motivation and, ultimately, improve performance.

QUESTION 13 (400 words)

At the Gold Coast 2018 Commonwealth Games, Australian javelin thrower Kathryn Mitchell won her first gold medal. Mitchell had failed to earn a medal in three previous Commonwealth Games and the Rio 2016 Olympic Games.

After performing a throw of over 68 metres on her first attempt at the Gold Coast 2018 Commonwealth Games – the longest distance to be thrown by a woman in the sport in over 5 years – Mitchell had this to say about her preparation:

> *'I have worked a lot this season not to focus too much on results and more on the process. It has worked and it's a little bit unbelievable. If I put all distances out of my mind, I knew I could throw the Australian record eventually but said to myself, "Just allow it to happen and it will come."'*

SOURCE 1 Australian javelin thrower Kathryn Mitchell

Reflecting on her thoughts during the event, Mitchell said:

> *'I just tried to concentrate on what I was doing, and I did that on the first throw. Then it was awfully distracting for me for the next three throws as I was trying to get calm again. It took quite a while to get the adrenalin down again because I need to be so relaxed and calm when I throw, so that was a challenge. Once I relaxed again I threw another 68.'*

Evaluate how Kathryn Mitchell's preparation for the Gold Coast 2018 Commonwealth Games affected her performance. In your response, refer to the stimulus provided and comment on the application of sport psychology concepts such as confidence, motivation, arousal, attention and concentration.

Check your obook assess for the following additional resources and more:

- **assess quiz** — Test your skills with this auto-correcting multiple-choice quiz for Chapter 4
- **Revision notes** — Make your own revision notes for assessment tasks with this handy template
- **Data analysis worksheet** — Chapter 4 review – Practice your data analysis skills with this worksheet
- **Practice assessment task ISMG** — Instrument-specific marking guide for the practice assessment task in Chapter 4

Practice assessment task

Subject	Physical Education	**Instrument number**	
Technique	Project – folio		
Unit	2 Sport psychology, equity and physical activity		
Topic	1 Sport Psychology integrated with a selected physical activity		

Conditions			
Duration	5 hours		
Mode	Multimodal (visual and written or spoken)	**Length**	Multimodal 9–11 minutes
Individual / Group	Individual	**Other**	Examples of multimodals include: → a pre-recorded presentation submitted digitally → a presentation conducted in front of an audience (class or teacher) → a digital portfolio of video, images and diagrams with annotations or commentary → a multimedia movie or slideshow that may combine images, video, sound, text and a narrative voice.

Context

Throughout this unit, you have been applying and evaluating the effectiveness of various psychological techniques for optimising performance, including those that are available before an event (i.e. pre-performance) and during an event (i.e. in-performance). The success of these techniques will be determined by an analysis of primary data collected over the course of Unit 2, both before and during performance.

Task

Evaluate whether pre-performance or in-performance psychological techniques had the greatest impact on improving your performance in authentic environments. Synthesise primary and secondary data to justify your conclusion.

To complete this task, you must

- → Recognise and explain:
  - → Performance can be analysed and improved using pre-performance techniques or in-performance techniques.
  - → Pre-performance techniques
  - → In-performance techniques
  - → Body and movement concepts about the specialised movement sequences
    - quality of movement
    - body awareness
    - space awareness
    - relationships
- → Analyse primary and secondary data to show how sport psychology techniques can influence performance.
- → Implement the sport psychology strategies and movement strategies to gather primary data about the outcomes, implications and limitations of decisions.
- → Evaluate the effectiveness of sport psychology techniques to:
  - → improve personal performance of the specialised movement sequence
  - → optimise personal performance using two body and movement concepts (quality of movement and one other).

You can find a detailed instrument-specific marking guide (ISMG) for this task on your obook assess.

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