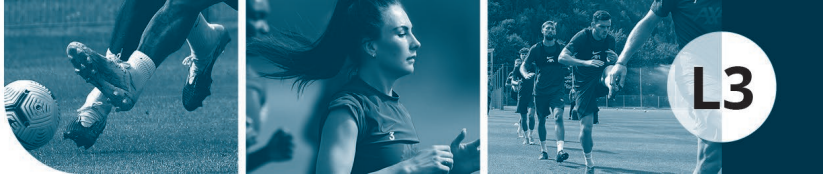

Unit 32: Sports Performance Analysis

Delivery guidance

Approaching the unit

This unit aims to give learners the skills needed to carry out structured observation of a sports performance, to identify areas for improvement and to provide training feedback to athletes. Learners will study the components of successful performance in sport and the different methods of analysis that are applied to different areas of performance.They will analyse sport through performance profiling to identify different areas of performance, including measures of fitness, tactics and technical components for success.

This unit can be taught with practical sessions to enable learners to study and use different methods of performance analysis, to understand benchmarks for performance, and to use tools for analysing performance and providing feedback.

Delivering the learning aims

Learning aim A

Learners will need to examine methods and techniques for analysing sports performance. They will need to be able to recommend specific methods and techniques for individual or team performance analysis and be able to justify their recommendations. You should introduce learners to the purpose of performance profiling and enable them to carry out different methods used for analysing sports performance. Learners need to be given the time and equipment needed to practise using the techniques needed to carry out sports analysis. You should give learners the opportunity to observe coaches working with individuals and teams so that they will be able to see how performance can be measured and analysed in a sporting environment.

Learning aim B

This learning aim centres on exploring established ideal models, benchmarks and protocols for performance analysis of an individual athlete or team.

Introduce learners to different information sources to research ideal performance models and benchmarks. Case studies would be useful for learners to explore how to use and apply protocols and materials for performance analysis. Learners need to be given time, facilities and relevant equipment to practise using these methods.

Learning aim C

For this learning aim, learners must carry out an analysis of a sports performance of an individual athlete of team. Learners should use the performance analysis protocols and materials developed in learning assessment B. They should carry out the performance analysis, collate their data and present their results. They must also set goals for the individual or team for future development.

This learning aim is best delivered through practical sessions. Learners will require access to the relevant equipment and facilities needed for their chosen sport/athlete.

Learning aim D

This learning aim centres on the analysis of collated data and on providing detailed feedback to the individual athlete or team analysed in learning aim C. Learners must also set goals for future development of the individual/team.

You should introduce learners to the purpose of comparing data to benchmarks and ideal models. Learners must be given the equipment and facilities needed to practise carrying out observational analysis on an individual athlete or team. You could use peer workshops to enable learners to give feedback and rehearse setting goals. This could also be done with the use of case studies to enable learners to see a range of different performance data. Learners then need to be able to give feedback on performance and setting goals. They must be given the opportunity to practise these skills for success in their assessment.

Assessment model

Learning aim	Key content areas	Recommended assessment approach
A Examine methods for analysing sports performance	**A1** Performance profiling **A2** Methods for analysing **A3** Techniques for sports analysis	Produce a report on methods of analysing sports performance, evaluating their relevance and usability for a coach.
B Explore ideal models, benchmarks and protocols for performance analysis	**B1** Information sources to establish ideal performance models and benchmarks **B2** Protocols and materials for performance analysis	Produce a presentation explaining the performance demands, ideal models and performance benchmarks of an individual or team sport. Then using this information produce your own analysis method for this sport.
C Carry out an analysis of sports performance of an individual athlete or team	**C1** Carrying out a sport analysis **C2** Collating and presenting analysis results	Provide a summary report of an observational analysis on an individual athlete or team. Provide feedback on performance and setting goals for future development.
D Review the collected analysis data and provide feedback to individual athlete or team	**D1** Comparing data to benchmarks and ideal model **D2** Providing feedback to an athlete or team on performance	

Assessment guidance

This unit is internally assessed. There is a maximum number of three summative assignments for this unit. Tutors should refer to the assessment guidance in the specification for specific detail, particularly in relation to the requirements for Pass, Merit and Distinction grades.

The first assessment for this unit is a report that focusses on methods of analysing sports performance and evaluates their relevance and usability for a coach. Learners can draw on a range of performance profiling, testing and analysis methods and techniques that gather information from across the range of the stated content.

The second assessment is a presentation which explains the performance demands, ideal models and performance benchmarks of an individual or team sport. Using this information learners must then produce their own analysis method for their chosen sport. Learners should draw on varied sources of information, e.g. journal articles, appropriate textbooks, national governing bodies, live performance and statistics to evaluate ideal models, benchmarks and analysis processes.

The final assessment is a report of an observational analysis on an individual athlete or team, which provides feedback on performance and setting goals.

Getting started

This gives you a starting place for one way of delivering the unit, based around the recommended assessment approach in the specification.

Introduction
Introduce the learners to this unit by discussing sports performance and the purpose of sports performance analysis. Allow learners to discuss examples from their own experiences of team and individual sports performance and draw upon those from professional sport.
Learning aim A: Examine methods for analysing sports performance
• Introduce the learning aim by asking learners to discuss 'the fear of failure'. • Learners should think about how this fear can affect a sports person's performance. • Learners should be taught about the aims of performance profiling, the process of profile construction and the performance profiling cycle. • Learners should be given the opportunity to observe sports performers in competitive situations. They can then analyse specific areas of performance and record successes and failures. Learners can convert this data into a suitable graph and give written notes about the sports person's performance. Learners should next explain which parts of their research were quantitative and which were qualitative. • You could lead learners into a discussion about the horn or halo effect by asking them to consider examples where they felt an athlete/sports person was influenced by a favourable or unfavourable trait and judged by it. Learners should discuss how this can impact on the first impressions and reputations made by this player. Learners should consider the horn or halo effect and discuss how this applies to the scenario of the sports person. • Learners should produce a mind map that contains information about the importance of communication between the coach and athlete/team in performance profiling. Learners should consider the skills needed by the coach and how their characteristics can lead them to become a successful coach. • Ask learners to select a sport of their choice. They should identify as many areas as they can that a coach would be interested in, e.g. positional play, movement patterns, fitness. Ask learners to discuss how this information can be used by the coach to highlight players' strengths and weaknesses and how, in turn, this enables specific areas to be addressed and improved. • Learners should be given time, facilities and equipment to enable them to explore different performance analysis techniques.
Learning aim B: Explore ideal models, benchmarks and protocols for performance analysis
• You could introduce this learning aim by asking learners to identify factors which need to be considered when analysing a sports person carrying out a specific skill to ensure an ideal performance model. Learners should discuss the biomechanical properties of the skill and any issues surrounding the filming/positioning of the camera. Ask learners to

explain how they would minimise filming issues so that a perfect model of the skill can be recorded.

- Learners could research a national governing body (NGB) of their choice to find information on coaching material and examples of ideals or benchmarks for performance. Learners could collate this information into a booklet, which could then be shared around the class so that each learner has a good range of examples of different sports.
- Learners need to have access to information sources to establish ideal performance models and benchmarks. Information sources could include observations/recordings made by themselves or others, information about coaching courses, academic papers/journals/documents on coaches, teachers and sports scientists. Other information sources include the internet and social media, match statistics and NGB sources.
- Allow learners the opportunity to summarise sources of information. They will need to prepare materials for gathering information and consider evaluation performance measures.
- You could ask learners to identify the potential sources of information they could use to produce a valid and reliable ideal model or benchmark for the performance analysis of a sport of their choice.

Learning aim C: Carry out an analysis of sports performance of an individual athlete or team

- For this learning aim, learners need to carry out an analysis of a sports performance of an individual athlete of team. They must carry out the analysis, collate their data and present their analysis results.
- Learners must be given time to use performance analysis protocols and materials. They need to practise carrying out observations in different environments and focus on performance and process, not outcome.
- Learners need experience of collating and presenting analysis results. They must be given the facilities, equipment and time needed to gather information during and after the athlete's/athletes' performances. They should use a variety of collation methods and present their findings in suitable formats which allow conclusions to be made.
- You could ask learners to discuss the benefit to coaches and athletes of numerical data displayed in graphs/charts and as numerical spreadsheets. Learners should consider how feedback and information are delivered and the importance of clear and concise information delivery.
- Learners can carry out internet research to find examples of annotated sports videos. This will allow them to see how videos can be a very useful performance analysis tool.

Learning aim D: Review the collected analysis data and provide feedback to individual athlete or team

- This learning aim centres on the analysis of collated data and on providing detailed feedback to the individual athlete or team analysed in learning aim C. Learners must also set goals for future development of the individual/team.
- Learners need to be taught how to compare data to benchmarks and ideal models so that they can review the collected analysis data and give feedback to their individual athlete or team.

- Learners should be given the opportunity to practise drawing conclusions based on relevant evidence and data gathered during their performance analysis in learning aim C. They should consider outcome mismatches, (i.e. poor technical performance leading to success or good technical performance failing). Learners must practise linking outcomes to observations of performance. They should think about cause and effect technically and tactically. Learners need to become confident at identifying patterns and anomalies in performance.
- Learners must rehearse providing feedback to an athlete on performance. This can be done through case studies, but would be best delivered through practical sessions with athletes from different sports.
- You could ask learners to discuss the factors they would need to consider when giving feedback to an athlete on their performance. Learners should discuss the need for information and the importance of not overloading athletes with too much feedback. Learners could investigate how they can break down their feedback into categories and can consider the types of questions they might ask to check the athlete's understanding of the feedback given.

Details of links to other BTEC units and qualifications, and to other relevant units/qualifications

This unit links to:

- Unit 28: Fitness Testing
- Unit 33: Rules, Regulations and Officiating in Sport.

Resources

In addition to the resources listed below, publishers are likely to produce Pearson-endorsed textbooks that support this unit of the BTEC International L3 Qualifications in Sport. Check the Pearson website at: (http://qualifications.pearson.com/endorsed-resources) for more information as titles achieve endorsement.

Textbooks

Allen MB, *Sports Exercise and Fitness: A Guide to Reference and Information Sources* (Libraries Unlimited, 2005) ISBN: 9781563088193 – a good first stop resource for those seeking information on sports and fitness.

American College of Sports Medicine, *ACSM's Guidelines for Exercise Testing and Prescription*, Seventh Edition (Lippincott Williams and Wilkins, 2005) ISBN: 9780781745901 – handbook of standards on exercise testing and prescriptions.

Coulson M, *The Fitness Instructor's Handbook: A Complete Guide to Health and Fitness (Fitness Professionals)*, Second Edition (Bloomsbury, 2013) ISBN: 9781408178263 – handbook with sole focus on assessment and scientifically based assessments.

Hazeldine R, *Fitness for Sport* (The Crowood Press, 2000) ISBN: 9781861263360 – a good introductory guide for this course.

Heyward VH, *Advanced Fitness Assessment and Exercise Prescription*, Fifth Edition (Human Kinetics, 2006) ISBN: 9780736057325 – comprehensive approach to physical fitness appraisal and exercise prescription.

Howley ET and Franks BD, *Health Fitness Instructor's Handbook*, Fourth Edition (Human Kinetics Europe, 2003) ISBN: 9780736042109 – for health and fitness professionals who want to keep on top of the latest advances.

Maud PJ and Foster C, *Physiological Assessment of Human Fitness*, Second Edition (Human Kinetics Europe, 2005) ISBN: 9780736046336 – aimed at students of exercise physiology, as well as health professionals working in clinical settings. Covers assessment methods for aerobic and anaerobic power.

O'Donoghue P, *An Introduction to Performance Analysis of Sport* (Routledge Studies in Sports Performance Analysis) (Routledge, 2014) ISBN: 97804157398861 - an essential introduction to the fundamental principles of performance analysis of sport and how to develop and operate performance analysis systems.

Powers SK and Howley ET, *Exercise Physiology: Theory and Application to Fitness and Performance*, Sixth Edition (McGraw Hill Higher Education, 2006) ISBN: 9780071107266
– a great, very recent core textbook for exercise physiology

Sharkey BJ and Gaskill SE, *Fitness and Health*, Sixth Edition (Human Kinetics, 2006) ISBN: 9780736056144 – a good introductory text for new learners.

Skinner JS, *Exercise Testing and Exercise Prescription for Special Cases: Theoretical Basis and Clinical Applications*, Third Edition (Lippincott Williams and Wilkins, 2005) ISBN: 9780781741132 – a good introductory guide on testing and prescriptions

Watson AWS, *Physical Fitness and Athletic Performance: A Guide for Students, Athletes and Coaches*, Second Edition (Routledge, 1996) ISBN: 9780582091108 – a slightly higher level text giving accounts of the biological basis of athletic performance and training.

Journals

British Journal of Sports Medicine (BMJ Publishing Group Ltd) – authoritative original research, reviews, and timely debate in sports and exercise medicine.

Exercise and Sport Sciences Reviews (Lippincott, Williams and Wilkins) – quarterly reviews of the most contemporary scientific, medical and research based topics in the field of sport, medicine and exercise science.

International Journal of Sports Science and Coaching (Sage) – this journal publishes articles which integrate theory and practice in sports science and promote critical reflection when coaching.

Medicine and Science in Sports and Exercise (American College of Sports Medicine) – investigations, clinical studies and reviews of current topics in sports medicine and exercise science.

Research Quarterly for Exercise and Sport (Taylor & Francis) – publishes research in to the art and science of human movement.

Websites

A range of websites looking at topics and resources on the subjects of coaching, human movement, sports medicine and exercise science;

www.1st4sport.com – Coachwise

www.bases.org.uk – The British Association of Sport and Exercise Sciences

www.humankinetics.com – Human Kinetics

www.sportsci.org – Sport Science

www.sportscoachuk.org – UK Coaching

www.topendsports.com – Topend Sports: the Sport and Science Resource, which provides a range of information on sport, sport medicine and sports psychology.

Pearson is not responsible for the content of any external internet sites. It is essential for tutors to preview each website before using it in class so as to ensure that the URL is still accurate, relevant and appropriate. We suggest that tutors bookmark useful websites and consider enabling learners to access them through the school/college intranet.