BTEC
HIGHER NATIONALS

Sport and Exercise Science

Higher National

Diploma Lvl 5

Pearson

Unit 16: Performance Analysis

Unit code	M/616/1053
Unit level	5
Credit value	15

Introduction

The analysis of performance is a complex process that reviews the tactics, techniques and movements of an athlete competing with in their sports. Real-time and lapsed-time analysis is observed in many of today's sports in action and during reflection. The key objective is to enhance interventions to assist the coaching process and elicit performance enhancement. It is used to inform the athlete and coaches on what happened as opposed to perceived outcomes. On average, athletes and coaches can only recall 30% of performance correctly. This demonstrates the importance of performance analysis to ensure that the facts are evidenced to help ensure the correct performance improvements are implemented. The use of technology is paramount to make this an accurate and robust process to give the detailed feedback required to show effective improvements in performance.

The aim of this unit is to provide students with the knowledge and understanding of performance analysis within sport and how it is used to aid development. Students will engage in researching the methods used to analyse performance, how to create a performance profile, practically analyse performance, and carry out a post-event analysis to provide feedback. They will gain an understanding of the importance of the analysis process and how to utilise technology to assist them in completing these tasks.

As students progress through this unit, they will gain the practical and technical knowledge to review the positives and negatives of performance to gain the evidence that will support performance improvements. Further to this, they will understand how to plan effective performance analysis that meets the needs of the observed performer.

The knowledge, understanding and skill sets gained in this unit will help students to appreciate the complexity of performance analysis and the need to use valid and reliable approaches to ensure they give technical feedback to support athletes.

Learning Outcomes

By the end of this unit students will be able to:

1. Evaluate the methods used to analyse sports performance

2. Create a performance profiling system to indicate the key requirements of a selected sport

3. Analyse the sports performance of individuals

4. Carry out a post-event analysis to provide feedback to aid the development of sports performance.

Essential content

LO1 Evaluate the methods used to analyse sports performance

Performance profiling systems:

Types of profiling

Aims and applied uses

Assessment of sports and performance

Construction of a profiling systems

How to grade and analyse systems

Ways in which to display performance profiling systems

Identifying and prioritising identified areas of strength and weaknesses

Physical fitness tests for analysis:

Cardiovascular testing, e.g. Wingate Anaerobic Test, Harvard Step Test, intensity testing

Muscular testing, e.g. endurance, power, strength

Skill-related assessment, e.g. flexibility, balance, stability, speed

Field-based testing, e.g. Illinois Agility Test, sprints, Yo-Yo intermittent recovery test and endurance testing, Global Positioning System (GPS) and distance measuring methods

Health-related e.g. bioelectrical impedance, body mass index, skinfold

Psychological tests:

Questionnaires and interviews

Motivation

Imagery

Confidence

Stress

Competitive anxiety

Technical and tactical analysis:

Real-time and lapsed-time analysis

Quantitative measures, e.g. statistics, performance checklists, positions in play

Qualitative measures, e.g. observations, performance cues, movement styles

The use of technology to assist with analysis, e.g. Dartfish, Sportscode, apps

Video analysis and using software, e.g. using apps and technology

Notational analysis systems

Factors that impact on analysis:

Environment used for testing, e.g. indoor, outdoor, space

Validity and reliability of methods used

Technical knowledge of administrators

Quality of information captured

Time taken and meeting the aims of analysis

LO2 Create a performance profiling system to indicate the key requirements of a selected sport

Understand the requirements of individual and team sports:

Review the performance requirements of different sports to find differences

Observation methods to identify needs and skills

Technical and tactical requirements for success in sports:

Technical skills and techniques, e.g. shooting, passing, movement

Tactical approaches for attacking and defence

Fitness requirements for success in sports:

Physical fitness requirements, e.g. endurance, strength, body composition

Skills-related fitness requirements, e.g. agility, power, speed

Psychological requirements for success in sports:

Psychological requirements, e.g. confidence, aggression, relaxation, emotional intelligence

LO3 **Analyse the sports performance of individuals**

Assessing the technical and tactical requirements of selected sports:

Analysis of sports performance: technical analysis, notational analysis, accurate recording

Technology-based recording methods, e.g. GPS systems, technique apps

Assessing the fitness requirements of selected sports:

Physical fitness testing, e.g. multi-stage fitness test, VO2 max, Wingate test

Skill-related fitness, e.g. 30m sprint, standing long jump, vertical jump

Assessing the psychological requirements of selected sports:

Questionnaires, e.g. sport competition anxiety test (SCAT)

Interviews to discuss completion based factors that impact on performance

LO4 **Carry out a post-event analysis to provide feedback to aid the development of sports performance**

Sports performance analysis feedback:

Strengths and areas for improvement

Analysis of data collection

Creation of charts and graphs to show findings

Conclusions made from observations

Methods of delivering outcomes to athletes

Recommendations for improvement:

Physiological recommendations, e.g. training programmes to aid development, training methods to adopt for improving performance

Psychological recommendations e.g. psychological skills training, mental rehearsal techniques

Goal setting:

Goal setting programmes

SMART targets

How to set and implement short-, medium- and long-term goals to aid improvements in performance

Learning Outcomes and Assessment Criteria

Pass	Merit	Distinction
LO1 Evaluate the methods used to analyse sports performance		
P1 Investigate the methods that are used to analyse sports performance **P2** Evaluate the factors that impact on the analysis of sports performance	**M1** Evaluate the significance of the different methods of analysis of sports performance	**D1** Critically evaluate the methods of sports analysis by providing examples to support judgments made on their effectiveness
LO2 Create a performance profiling system to indicate the key requirements of a selected sport		
P3 Discuss the requirements of a selected sport **P4** Create a performance profiling system to demonstrate the importance of the requirements and how they relate	**M2** Illustrate a performance profiling system to display the requirements of a selected sport	**D2** Justify a performance profiling system to support the identified requirements of a selected sport
LO3 Analyse the sports performance of individuals		
P5 Plan the analysis of a performer in a selected sport. **P6** Analyse the performance of a performer in a selected sport	**M3** Demonstrate valid and reliable analysis methods to capture the analysis of a performer in a selected sport	**D3** Critically analyse the performance of a performer in a selected sport by collecting varied and detailed analysis evidence
LO4 Carry out a post-event analysis to provide feedback to aid the development of sports performance		
P7 Interpret the analysis of a sports performer to provide feedback. **P8** Produce a post-event analysis feedback report to aid the development of sports performance	**M4** Evaluate the analysis of a sports performer to provide feedback and recommendations to improve future performance	**D4** Critically evaluate the analysis of a sports performer to provide detailed feedback and recommendations that are justified

Recommended resources

Textbooks

BARTLETT, R. (Milton Park, Abingdon, Oxon) (2009) *Introduction to sports biomechanics*. 1st ed. Routledge.

BULL, S. (Marlborough, Wiltshire) (1998). *Sport psychology*. 1st ed. The Crowood Press.

CARLING, C., REILLY, T. and WILLIAMS, A. (London [u.a.]) (2010). *Performance assessment for field sports.* 1st ed. Routledge.

HALL, S. (Boston) (2003). *Basic biomechanics*. 1st ed. McGraw-Hill.

HUGHES, M. and FRANKS, I. (Abingdon, England) (2010). *Notational analysis of sport.* 1st ed. Routledge.

JONES, R. (London [u.a.]) (2010). *An introduction to sports coaching*. 1st ed. Routledge.

Links

This unit links to the following related units:

Unit 13: Technology in Sport

Unit 33: Physical Literacy

Unit 34: Advanced Coaching

Unit 38: Exercise Physiology