
5.1.2 Module 2562: Section B - Acquiring and Performing Movement Skills



C3.1a, C3.2, C3.3

LP3.2

5.1.2.1 Introduction

Section B of Module 2562 helps candidates to develop an understanding of how they can most effectively acquire and improve their movement skills in a variety of physical activities. Candidates should have established some knowledge of psychological factors related to the acquisition and performance of movement skills during Key Stage 4. These specifications enable candidates to further their knowledge and understanding in terms of the developmental learning processes that occur during practice and performance.

Study focuses on the variety of movement skills exhibited in the performance environment; the development and control of these movement skills from early childhood experiences through to competitive performance situations; the contributions of an information processing approach to the performance of movement skills; and how teachers and/or coaches can maximise the effectiveness of practice sessions to improve performance. This area of study affords candidates the opportunity to re-evaluate their strategies for improving practical performance, and to apply new strategies in order to enhance their own performance. This application should consist of a synthesis of theory and practice as reflected in the aims and objectives of the specification, enabling candidates to appreciate the learning of movement patterns, their development into skills which are then available for selection, when appropriate, in performance situations. This provides a sound foundation prior to A2 Module 2565 Option B2: Psychology of Sport Performance, when candidates can investigate a variety of psychological concepts related to the preparation, participation and evaluation of the consequences of performance in physical activity and sport.

5.1.2.2 Candidate's Learning Experience

Candidates gain knowledge and understanding as a result of involvement in, and reflection on, practical experiences. The tables in Section 5.1.2.5 provide examples of possible learning experiences.

Candidates should use their experiences gained through their performance of practical activities as a basis on which to improve their psychological understanding. They can use this understanding to help in the overall process of improving their own performance and that of others.

5.1.2.3 Unit Assessment

Candidates' knowledge and understanding of Module 2562 Section B is assessed in Unit 2562, Section B, where a candidate answers two compulsory questions (2 x 15 marks). Each question is structured into a series of short sub-questions. Candidates may be required to interpret and to sketch graphs and diagrams. The use of technical language is expected.

5.1.2.4 Module 2562: Section B Content

Defining, Developing and Classifying Skills in Physical Education

The Characteristics of Skilful Performance

- Identify key characteristics (learned, efficiency, goal-directed, follows technical model but distinct from technique, fluent, aesthetic).

Definition and Characteristics of Motor Skills, Perceptual Skills and Cognitive Skills

Classification of Movement Skills

- Place and justify examples of movement skills on a variety of continua, to include: muscular involvement (gross – fine); environmental influence (open – closed); continuity (discrete – serial – continuous); pacing (externally paced – self paced); difficulty (simple - complex); organisation (low - high).
- The application of classification in the organisation and determination of practices. Knowledge of methods of manipulating skills to facilitate learning and to improve performance. Knowledge of part and whole practice methods (including progressive part and whole-part or whole). Awareness of links with transfer of learning.

Definition and Characteristics of Abilities

- Identify key characteristics (innate, underlying and enduring traits). Knowledge of gross motor abilities and psychomotor abilities.

Motor Skill Development

- Knowledge of the progression from motor abilities → fundamental motor skills (FMS) → sport-specific skills. Awareness of influences of early experiences and environmental exposure, with an understanding of key stages in motor skill development.

Information Processing during the Performance of Skills in Physical Education

Basic Models of Information Processing

- Understand a variety of models and their key components including: Welford (display, sensory information, sense organs, perceptual mechanism, effector mechanism, response and feedback); Whiting (display, receptor systems, perceptual mechanism, translatory mechanisms, output, feedback).

Memory

- Understand a basic model of the memory process. Awareness of the interaction of memory with the perceptual process (selective attention). Definition of short term sensory store (STSS), short term memory (STM) and long term memory (LTM). Knowledge of strategies to improve the mechanisms of information retention and retrieval.

Reaction Time

- Definitions of reaction time (RT), movement time and response time. Awareness of the importance of a short reaction time. Identify the factors affecting response time in practical activities. Knowledge of the psychological refractory period, choice reaction time (Hick's Law), and the role of anticipation.

Feedback

- Knowledge of the importance of feedback. Identify the functions of feedback. Identify different types of feedback. To include: intrinsic feedback and extrinsic feedback; positive feedback and negative feedback; knowledge of results and knowledge of performance.

Candidates should analyse the information processing requirements of the movement skills experienced in their practical activity experience.

Motor Control of Skills in Physical Education

Motor and Executive Programmes

- Definition as a generalised series of movements and knowledge of the creation of programmes in long term memory. Awareness of the major programmes/subroutines of a number of movement skills.

Motor Control

- Knowledge of open loop control and closed loop control.

Schema Theory

- Understanding as a way of modifying the motor programme by use of schemes or rules of information. Identify sources of information, namely recall schema and recognition schema to include: knowledge of initial conditions; knowledge of response specification; sensory consequences; movement outcomes.

Candidates should analyse how movement skills are controlled and co-ordinated. A number of motor programmes and the relevant sub-routines should be identified from the candidates' practical activity experience. An analysis of the factors affecting the development of schema for movement skills should also be undertaken.

Learning Skills in Physical Education

Motivation and Arousal

- Definition of motivation and knowledge of Drive Reduction Theory (Hull). Knowledge of intrinsic and extrinsic methods of motivation. Basic understanding of arousal. Knowledge and application of Drive Theory (Hull, Spence) and Inverted U Theory (Yerkes and Dodson). Justify the effective use of motivational strategies.

Theories Related to the Learning of Movement Skills

- Description and application of these theories. associationalist/connectionist theories (operant conditioning); cognitive theories related to the work of Gestaltists (wholeness/insight learning); social/observational learning theories, including knowledge of Bandura's model (demonstration, attention, retention, motor reproduction, matching performance), and the factors which affect modelling.

Reinforcement

- Definition of positive reinforcement, negative reinforcement and punishment. Knowledge of methods of strengthening the stimulus-response (S-R) bond through repetition, satisfaction/annoyance (emotional intensity) and through physical and mental preparedness, for example, (Thorndike). Justify the appropriate use of reinforcement.

Phases of Movement Skill Learning

- Identify cognitive, associative and autonomous phases of learning (Fitts and Posner). Knowledge of the characteristics of these phases and awareness of the practical implications for improving the candidate's learning and performance.
- Characteristics of these phases and awareness of the importance of guidance in improving the candidates' learning and performance. This should include visual (early phases of learning), verbal (later phases of learning); manual and mechanical (development of kinaesthetic awareness together with knowledge of safety issues). Justification of the effective use and limitations of these types of guidance.

Transfer of Learning

- Identify different types of transfer that occur in practical performance including: positive transfer (and knowledge of ways of optimising its effect); negative transfer (and knowledge of ways of limiting its effect); proactive transfer; retroactive transfer; bilateral transfer. Awareness of links with Schema Theory. Awareness of the importance of the practice method in the transfer of learning.

Practice Conditions

- Knowledge of setting up of practice/training sessions to maximise effectiveness. Justify the appropriate use of massed and distributed practice methods (for different ability levels and for different activities). Awareness of the importance of variability of practice. Appraisal of the role of mental practice rehearsal (vs. physical practice rehearsal).

Candidates should analyse the methods by which performers can most effectively learn movement skills.

5.1.2.5 Module 2562: Section B - Examples of Learning Experiences

The following tables highlight a progressive approach to the development of knowledge, understanding and application of the Section B content by the candidate.

Required Knowledge: The classification of movement skills

| Theoretical Learning Experience | Practical Learning Experience |
|--|---|
| Recall the descriptors used to classify a variety of movement skills. <i>(acquire)</i> | During the performance of practical activities, recognise and classify the types of movement skills performed. <i>(acquire)</i> |
| Explain how and why we classify movement skills via the use of continua. <i>(acquire, apply)</i> | During the performance of practical activities, analyse and classify on continua the movement skills produced by another performer. <i>(acquire, apply)</i> |
| Select a variety of movement skills and classify them on a single continuum (for example, open-closed), justifying their placement relative to one another. <i>(acquire, apply, evaluate)</i> | Perform techniques from one practical activity that could be classified ranging from one end of a single continuum to the other. <i>(acquire, apply, evaluate)</i> |
| Discuss the importance of the awareness of the classification continua for the effective teaching and learning of movement skills. <i>(acquire, apply, evaluate, appreciate)</i> | By using knowledge of classification, devise in a practical lesson progressively more advanced practices for the performance of movement skills. <i>(acquire, apply, evaluate, appreciate)</i> |

Required Knowledge: The importance of reaction time and response time

| Theoretical Learning Experience | Practical Learning Experience |
|---|--|
| Define the terms reaction time, movement time and response time. <i>(acquire)</i> | Identify and perform practical activities in which a short reaction time is important. <i>(acquire)</i> |
| Describe how to assess reaction time/ response time in a number of different practical activities. <i>(acquire, apply)</i> | Assess reaction time/response time in a variety of different practical activities for all the members of your class. <i>(acquire, apply)</i> |
| Explain the factors that can affect response time, describing both the positive and the negative effects. <i>(acquire, apply, evaluate)</i> | Compare the results from the reaction time/ response time tests. Explain the results that you have gathered. <i>(acquire, apply, evaluate)</i> |
| Discuss the importance of having both a short reaction time and a short response time for the efficient performance of practical techniques. <i>(acquire, apply, evaluate, appreciate)</i> | By using knowledge of reaction time and its associated concepts, devise strategies to enhance performance in a practical activity of your choice. <i>(acquire, apply, evaluate, appreciate)</i> |