A-LEVEL

PHYSICAL EDUCATION

7582/2 Factors affecting optimal performance in physical activity and sport
Report on the Examination

7582
June 2018

Version: 1.0

General

This was the first 7582/2 A-level Physical Education paper and overall the students have been well prepared by schools/colleges, with the mean mark being 54 out of 105. Both the specification content and the style and demand of questions were understood well through the interpretation of the command words. Students still need to better prepare for discuss questions and the quality of analysis and evaluation could be improved in a large number of cases. As with the first AS paper last year, it was very pleasing to see that many teachers have adapted their teaching to focus on the assessment objectives (AOs) to allow students to access the marks on this more rigorous style of assessment. Although some students could demonstrate analytical and evaluative comments, they were often through simple statements.

There were a very small number of items unanswered and little evidence that students had run out of time. Students performed best on Section C and worst on Section B. A very large number of students used additional sheets to finish off their extended responses. A number of new topics to the specification were included within this paper, for example Bernoulli's principle and Vealey's model of self-confidence. It was evident that these topics have been taught well in some schools/colleges and not so well in others, as responses were mixed.

Multiple choice questions (MCQs) were answered very well with more than 90% of students identifying the correct answer on 4 of the 6 contained in the paper. As mentioned, the analysis and evaluation demand of the paper (AO3) was less understood as demonstrated by students in the extended response questions and in a number of the short answer questions. Teachers should be aware that if students demonstrate excellent knowledge and understanding along with application to the question, but with no analysis or evaluation, the maximum mark awarded was 5 marks for the 8 mark questions and 9 marks for the 15 mark questions, due to the weighting of the AOs.

The synoptic element of the specification was assessed in question 04 and question 18. These were the best answered 8 and 15 mark questions respectively, which clearly highlights students are preparing appropriately for these types of questions, and can draw on and combine their understanding of topics from across the specification. However, schools/colleges are reminded of the synoptic element of the papers, where students have to demonstrate effective assimilation of topics in order to achieve the highest levels. A number of students failed to address all areas, which resulted in lower marks being awarded.

Section A – Exercise physiology and biomechanics

Question 01 and 02

Questions 01 and 02 were the least accessible MCQs on the paper. 61% of students correctly identified mass as a scalar quantity. All other possible answers were chosen, with students most commonly incorrectly identifying displacement.

71% were able to identify the acute injury as a sprain whilst strain was then the most common incorrect answer.

Question 03.1

The majority of students were able to identify two external forces acting on the athlete with 85% achieving at least 3 marks. The question also required students to explain the forces with many

being able to explain that gravity/weight is a downward force. The explanations for air resistance were often too vague. The answer needed to refer to the force being in the opposite direction to travel and not just against the performer.

Question 03.2

A large number of students accessed no marks on this question as they were unable to recognise the mechanical advantage of the 3rd class lever at the hip in relation to a wide range of movement or the ability of the resistance to be moved quickly. When students were able to give the advantage, only 7% were able to expand this knowledge and apply it to the long jumper, specifically how the advantage could allow them to jump further, which was the AO3 mark available.

Question 03.3

This question required students to identify ballistic stretching with 68% of students securing the one AO1 mark available. This was achieved through the use of terms such as bouncing or swinging. It was disappointing that many students achieved zero marks through the incorrect use of terms such as bounding in their descriptions of ballistic stretching.

Question 03.4

This proved to be a very good discriminator as the question required students to discuss the suitability of ballistic stretching for a long jumper. The command word discuss was sometimes not correctly understood by a number of students or they lacked the depth of knowledge to secure maximum marks available. This question required responses to cover why ballistic stretching is both suitable and not suitable for the long jumper. The responses which stated that it improved flexibility at the hip or the fast dynamic contraction often failed to apply this to the long jumper and thus were considered too vague to be credited. Many students only made positive points regarding the suitability and those who did refer to negatives often didn't explain why, eg they would say ballistic stretching can lead to injury, which was too vague. It is important that students are prepared to include the required detail in this type of question.

Question 04

This was the first of the 8 mark extended response questions on the paper and the first of the two synoptic questions. It was pleasing to see how students answered this question, showing excellent knowledge of the advantages and disadvantages of creatine supplements and anabolic steroids to aid weight training and the impact on the next competition. This mean mark was 4.41 with responses being most commonly graded as level 3 responses (5 or 6 marks). Creatine was better known than anabolic steroids with many students able to identify the advantages of taking these substances with an encouraging number then applying their knowledge specifically to the weightlifter in the question. A small number linked their responses to the competition given in the question.

Overall 9% of students achieved level 4 marks, which was significantly higher than the other 8 mark questions in on the paper (4.6% and 4.9% respectively). Responses that included evaluative discussions around creatine being a legal supplement whereas anabolic steroids are illegal in competitions, in addition to the different disadvantages from both a physical and moral stance tended to achieve higher marks. Furthermore those students that were able to make evaluative points in relation to the next competition achieved higher marks.

Question 05

This was the first of the 15 mark extended responses, which was accessed by a large number of students. Most commonly responses were awarded Level 3 (7 to 9 marks) with 2.5% of students achieving Level 5. This was really encouraging for the first assessment of this specification. This question specifically allowed students to demonstrate their biomechanical knowledge in detail with the question covering both Bernoulli's principle of lift and the factors influencing drag. Bernoulli's principle is a new addition to the specification but most students had a basic understanding of it, although not all were able to apply it effectively to the cyclist. Only a small number of students failed to refer to Bernoulli's principle in their responses but for some it was very basic knowledge with limited relevant application.

Although there was some confusion in the application of Bernoulli's principle to a cyclist, most students were able to discuss the influence of drag. This part of the question was accessible to the majority of students with most responses being heavily weighted around the second part. Furthermore, the inclusion of Figure 2 supported many students in being able to identify the factors that influenced drag for Laura Kenny specifically, which showed clear application of knowledge (AO2). Responses most commonly referred to the helmet, bike design and body shape, and how these helped the cyclist, with students referring to the movement of air, the pressure applied, the downward lift, and surface and form drag.

Section B – Sports psychology

Question 06 and 07

Question 06 was the best answered MCQ on the paper with 98% of students correctly identifying the drive theory and inverted U theory.

Question 07 was also well answered with 91% correctly identifying the description of social inhibition.

Question 08.1

This question required students to identify three characteristics of an individual with a need to achieve (Nach) personality. The full range of marks were awarded, which was slightly surprising for a recall question. Although generally well answered, students needed to ensure that answers were exclusively related to a need to achieve personality, not general points such as confidence, pressure and motivation. It is important that students approach these questions with care to ensure they can access the marks available.

Question 08.2

This question had three distinct parts to the question; identify and describe, alongside the need for a sporting example. Students had to specifically identify and describe one strategy a coach could use to develop approach behaviour. Surprisingly a quarter of students achieved zero marks. A common mistake made was the omission of the specific identification of a strategy. Students often went on to achieve 2 marks through the correct description and sporting example. Most commonly awarded points were reinforcement (although it was not often called this so only two marks were given for the explanation and example) and allow success. It was not common for a student to do all three aspects of the question, with only 20% achieving full marks. Teachers should ensure

students are prepared appropriately by ensuring they meet the demands of all parts of the question, by understanding the requirements of the different command words.

Question 09.1

This was the most accessible short answer question on the paper with 69% achieving full marks through correctly outlining the autocratic and laissez-faire styles of leadership. The majority of students correctly approached the question from the styles of leadership rather than what a coach would do when adopting these styles.

Question 09.2

The application of the two styles to sporting situations was also well answered with 47% of students achieving full marks. Commonly responses referred to the stage of learning required for each leadership style. Another popular response was the time and reference to the danger element.

Question 10

The second 8 mark extended question related to two stress management techniques and their suitability to the rugby player in Figure 4, who is preparing to take a conversion kick. Visualisation as a technique was better understood than centering. It was pleasing to see a number of students directly relating their responses to the context given in the question in order to demonstrate strong application (AO2). The best answers discussed the advantages of using both a cognitive strategy (visualisation) for the negative thoughts and a somatic strategy (centering) to ease the increased heart rate and muscular tension before the kick, before also evaluating the disadvantages and the alternative strategies that could be applied. Many students used the context of the symptoms given in the stem to support their evaluation.

Most students showed sound knowledge (AO1) and effective application (AO2) of visualisation, explaining what it was and how it would be used in rugby. However, few students evaluated this method (AO3), failing to identify any flaws or the positive impact this could have had on performance, or more specifically the conversion kick. In terms on centering, many students didn't know what this method was and incorrectly referred to cue utilisation theory. Those who did know what centering was were not able to demonstrate application or evaluation.

For evaluative comment centres and students should be aware that these are both positive and negative arguments which go beyond basic explanations but specifically address the impact on the performance in the question.

Question 11

The second 15 mark extended response question required students to analyse a statement from Mo Farah. It also related to Bandura's model of self-efficacy and Vealey's model of self-confidence. There was a clear spread of marks across all levels, although the question had the lowest mean mark of the 15 mark items (5.3 marks). Vealey's model of self-confidence is a new topic in the specification and was less known compared to Bandura's model. Some students were able to demonstrate, analyse and evaluate the model as applied to Mo Farah, whilst others only had a vague awareness of this theory. The techniques of applying the psychological theories to the situation and discussing their relevance were encouraging. Most students started with Bandura and many answers were written in depth with the four principles of the model applied to Mo Farah. Many answers also referred to the statements from the stem of the question which provided

students with greater supporting evidence and context with how they could be related to Bandura's and Vealey's theories. Weaker responses were not linked directly to the statement.

Section C – Sport and society and technology in sport

Question 12 and 13

The MCQs within the sport and society and technology and sport section were very well answered with 93% correctly identifying amateurism in question 21, and 96% able to identify personal factors that support the progression from talent identification to elite performance in question 13.

Question 14

This was a straightforward recall of knowledge question that required students to identify three characteristics of recreation. 75% of students achieved 1 or 2 marks but few achieved the full 3 marks as the answers were not giving characteristics related to physical recreation and were deemed too general. These included points such as no competition, no structure or skill.

Question 15

Duty of care is a new topic in this specification and many students weren't able to demonstrate knowledge of how coaches can demonstrate it. This was reflected in the modal mark of 1 out of 3. Commonly there was some repetition in answers given, specifically relating to first aid provision. Some of the answers were too general such as protect from harm or protect from injury, and did not specifically address the question.

Question 16

This was a good discriminatory question with marks being awarded across the full range. As with question 3.4, the command word discuss was not fully understood, with few answers addressing the positives and the negatives of commercialisation for officials. Many responses tended to answer from one perspective only, most commonly the positives with regards to accuracy of decisions and increased income for officials. Where students attempted to answer from both perspectives to form a discussion, many responses lacked breadth of knowledge. This was reflected in the modal mark being 2. However, some responses did show depth of understanding by explaining each positive and negative in detail.

Question 17

Most students made a fair attempt at this final 8 mark question with 45% achieving Level 2 (3-4 marks). Disappointingly, a significant number of students failed to address both parts of the question, specifically to evaluate the data provided by GPS. Although students were aware that a GPS device could incorporate heart rate monitors and other analytical data, this was not what the question asked and so references made to heart rate analysis were not acknowledged as relevant content. Instead the stem guided students into ensuring their responses related to player's movements, which a large number of students were able to do, whilst also showing effective application and evaluation of how the data can be used for team sports. The evaluation of the data provided could have included issues relating to accuracy and reliability, as well as the interpretation of the information for the benefit of the team. Students were able to access all AOs, many giving really excellent AO3 information.

Question 18

The last 15 mark extended response question was the second synoptic question on this paper, drawing on knowledge of theories of aggression from the sports psychology section, alongside strategies used to prevent player violence from sport and society. Two theories of aggression were named in the question, with many students aware of them and able to apply them to football and acts of aggression. The strategies to overcome the aggressive acts that still exist in football were sometimes discussed in depth, with other students electing for the breadth route, showing a variety of strategies. Although the question did not specifically ask students to reference the table provided, it added another dimension if students were aware that it was relevant to the evaluation of the strategies, and the data could be used to support their evaluative comments. As with many of the extended questions, many students failed to show detailed evaluation (AO3).

Mark Ranges and Award of Grades

Grade boundaries and cumulative percentage grades are available on the Results Statistics page of the AQA Website.