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Examiners' Report

Principal Examiner Feedback

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Pearson Edexcel

GCE Psychology 8PS0/02

Paper 2: Biological Psychology and Learning
Theories

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Paper Summary

The examination structure provided a range of question types over two main sections, Biological Psychology and Learning Theories. The final question required an extended response requiring candidates to address a theme that occurs in both biological psychology and learning theories.

Candidates' overall coverage of both biological and learning was consistent across the whole of the paper. There were very few unanswered questions and many of the questions were attempted in some detail, which benefitted the candidates.

Skill application across both areas was good for some and reflected those candidates were prepared for most aspects that the specification covered. Knowledge and understanding in several areas did impede students' awareness of what the question was asking resulting in a restricted number of marks being awarded. Candidates seemed to manage their time well and centres must be congratulated on their continuing development in preparing candidates for this 1 hour 30-minute paper.

Application of scenarios was not as strong again this year and reflected a lack of awareness that some candidates had in not using the scenarios within their answers. Some answers which portrayed excellent knowledge and understanding of the question content both short and extended response - but failed to apply any areas asked for by the question, resulting in completely generic responses.

Longer responses were generally well attempted as expected with a continuing development towards understanding key taxonomy and what the question is truly asking. Conclusions embedded within answers for some candidates supported their answers, allowing them to access higher marks. Candidates who achieved higher marks supported their answers with research studies, theories, application, amongst other areas – especially in the 12-mark question.

There was a consistent awareness in candidates understanding of most command verbs on this paper, additional review for some would have benefitted them.

Centres are directed to the support materials available online, which explore the various question types for questions in the examination and the taxonomy for each question type. The remainder of this Examiners' Report focusses on each individual question and gives specific examples.

This aim is to highlight areas of good practice and illustrate some common errors, and thereby be used to help prepare candidates for future 8PS0/02 examinations.

Candidates should be reminded to write only within the spaces provided. Additional paper should be used whenever extra writing space is required.

Question 1a

Many candidates were able to complete table 1 with the correct lobe. Well answered responses included the parietal and frontal lobe. Occipital was less well answered. Some candidates attempted the question adding in other areas of the brain. Access to marks was clear in terms of the taxonomy of the question which many were able to attempt.

Question 1b

Candidates produced a variety of responses mostly attempting to focus on strengths and weaknesses of brain functioning as an explanation of aggressive human behaviour. Candidates commented on a variety of strengths and weaknesses applicable to brain functioning as an explanation of aggressive human behaviour. Strengths focused mostly on supporting evidence from Raine et. al. and Phineas Gage as examples of brain functioning, whilst weaknesses focused on mainly alternative explanations such as social learning theory, hormones and occasionally evolutionary theory.

Some candidates' answers were fully developed providing a thorough A01 identification of the strength/weakness followed by clear justification of it, which resulted in 2 marks being awarded.

A significant number of candidates were able to grasp the A01 mark for the identification of the strength/weakness of brain functioning as an explanation of aggressive human behaviour however justification was not always expanded indicating a lack of understanding on the part of candidates – this occurred for example for some when applying reductionism as a weakness. This meant that candidates could not be awarded the A03 mark as their answers did not have the elaboration to explain why it was an actual strength/weakness.

Question 2a

Candidates who were prepared for this type of question answered it very well, successfully providing the calculations needed for 4 marks. The completion of columns "d" and "d²" were completed correctly by many candidates, although inaccuracies in calculations meant candidates sometimes lost marks later in their answers. A number of candidates did not attempt this question and centres would be advised to ensure that candidates spend time learning this type of question as it is a clear mathematical expectation of the specification.

Question 2b

Candidates struggled at times to access marks on this question. For some their knowledge of random sampling was accurate but hindered in terms of marks awarded due to the generic nature of their answers. Stronger answers identified a strength of random sampling in relation to the doctors, alertness, coffee and then justified this in terms of reducing sampling bias for example. Some candidates mixed up random sampling strength with other sampling techniques such as volunteer, leading to an inaccurate response. Only a minority of candidates did not attempt this question. Moving forwards candidates would benefit from additional practice of scenario-based questions like this.

Question 2c

Some candidates were able to answer this question effectively by identifying why Phil had used quantitative and qualitative data in relation to the scenario on coffee drinking. For many they went onto develop a justification of using both quantitative and qualitative data – success being accomplished in application to the scenario. Most candidates were able to distinguish between the differences between quantitative data in terms of the scenario, a minority mixed the terms up providing answers that could not be credited. The most successful candidates were able to identify quantitative data in terms objectivity or numerical data within the scenario of Phil and then were able to justify this in terms of reliability in

relation to Phil's study of the coffee drinking and alertness as possible examples. For qualitative data successful answers quite often related to the descriptive data from the post-interview with the doctors, justified in terms of increased validity of why the doctors felt it helped them for example. The most common mistake was to provide purely generic responses about quantitative and qualitative data which did not meet the criteria of the question.

Question 2d

Some candidates were able to identify at least one improvement for Phil's investigation, however many of these were either generic or not focused on the question specifies. Candidates who were able to identify an improvement in relation to Phil's investigation quite often could not justify their answer for any further marks. Several students provided answers that incorporated weaknesses of Phil's investigation, the question clearly specifies two improvements – therefore could not be credited for their answers. Stronger candidates would apply their improvements to Phil's investigation, giving specific details about Phil's study on self-reported caffeine levels and alertness in terms of their identification of an improvement, going on to justify their answers with reference to for example, population validity, ecological validity amongst other justification options.

Question 3

A few candidates produced accurate and well-developed answers centred on the role of evolution in human development worthy of level 4. These answers focused on theory elements of survival of the fittest, EEA, sexual selection, changes over time, gender development and protection. In addition, these answers were developed with competing arguments on hormones, reductionism, brain structure and social learning theory as alternative explanations of human development aggressive and non-aggressive; supported with evidence from a number of studies.

Many candidates could not produce a balance in their arguments which resulted in limited access to higher levels. Some candidates focused on describing and/or evaluating evolution and natural selection as an explanation of human development but failed to provide a balance of the two skills.

Some candidates went on to develop the concept of the hereditary process of continuation of adaptive genes shaping future generations with some additional key terminology. Others wrote basic descriptions before attempting an evaluation, comparing their answers with one or two other explanations of human development; quite often leaving their evolutionary and natural selection descriptions in a basic format.

Many candidates attempted A03, quite often providing answers for the role of evolution in human development with evidence from Buss (2005) amongst others. A minority of candidates went on to discuss "GRAVE" in their answers, considering the reliability etc. of the theory; this is a theory question and aspects of this technique do not apply in study evaluation formats alone. Candidates would have benefitted from additional evidence from other researchers to reinforce their answers and elaborate their arguments which would have allowed them to potentially access higher level marks.

As a level-based question, it is important to note that an A01/A03 response was required which needed to show an equal emphasis between knowledge and understanding versus evaluation and conclusion.

Those candidates who scored highly on both skills were able to demonstrate accurate and thorough knowledge and understanding of the role of evolution in human development. This A01 knowledge was displayed in a well-developed and logical evaluation, containing logical

chains of reasoning throughout the candidates answer, not just in the second part. This therefore allowed these candidates to demonstrate an awareness of the significance of competing arguments throughout their answer, allowing them to provide a balanced conclusion.

The most able candidates provided answers which did not just describe then evaluate the theory but described and evaluated throughout each statement or paragraph the candidate was writing about – this seemed to allow the candidates to access quickly and efficiently the balanced element of the level banding.

Question 4a

Candidates for this question provided a mixture of answers that were awarded marks accordingly. Some candidates provided a hypothesis which did not meet the requirements of the question as it states a hypothesis for the learning theories practical. A number of candidates confused this with other practical's across the courses.

Some candidates failed to realise that the hypotheses needed to be an operationalised hypothesis, indicating "difference" or "effect" - some form of causative statement and not correlational. Marks were awarded for correct knowledge of the learning theories hypothesis such as identification of males and females for the IV or for the DV significant number of times participants said thank you to the bus driver. Candidates would have benefitted from ensuring that all parts of the hypothesis were accurate and focused on the learning theories practical.

Question 4b

Many candidates attempted to provide a description of how quantitative data was gathered in their learning theories practical investigation. Answers varied from confusion with other practical's on the course for some candidates or answers which focused on qualitative areas of the learning theories practical investigation. Better answers were able to describe data counting within the context of the practical and then tallying the observed behaviour again in context of the learning theories practical investigation.

Question 4c

Most candidates were able to identify an appropriate conclusion from their learning theories practical investigation. Many candidates referenced accurate key areas from their practical conclusions **4c** such as we concluded that men are less polite than women as we observed them saying thank you more often. A minority of candidates provided just results as their answer therefore gaining 0 marks. Others provided conclusions from other practical investigations within the course – again gaining 0 marks. Justification of conclusions were most effective when clarified with results from their learning theories practical investigation.

Question 4d

Many candidates attempted this question with some success in terms of providing two weaknesses of their learning theories practical investigation. Some candidates correctly identified weaknesses of their learning practical but failed to make explicit links to the practical itself, therefore providing generic responses. A minority of candidates provided strengths or gave weaknesses for practical's that were not from learning theories. Candidates who did provide clear reference to their learning practical did not always go on to justify their weaknesses in full for additional marks. The most successful candidates referred clearly to lack of inter-observer reliability, interpretation of behaviours, extraneous variables, lack of standardised procedures, amongst others. These were then related to

subject bias, invalid results, replication problems, and reliability amongst other acceptable points.

Question 5a

Many candidates were able to provide an aim of Bandura's (1961) Bobo doll experiment. A minority provides aims of Bandura's other studies in addition to some candidates not developing their aims into an accurate identification of the Bandura's (1961) study. A few candidates left this blank indicating they may not have been fully prepared for this style of question.

Question 5b

Many candidates were able to grasp the A01 mark for identifying a strength of Bandura (1961) Bobo doll experiment. The most common answers for Bandura's study focused on sampling across different age ranges, application to society and standardised controls/procedure – in context of the study. For many answers there was a lack of justification of the strength being referred to which resulted in candidates only receiving partial marks for the strength. In some cases, candidates provided generic answers of Bandura's (1961) Bobo Doll experiment which resulted in no marks being awarded. This could indicate that candidates did not fully know the knowledge of this Bandura study or may have been unfamiliar with the necessity to provide a strength of Bandura's study. Candidates also, at times, provided inaccuracies in terms of their A01 knowledge from the study, for example, when referring to sample criteria, country of origin and type of data gathered, amongst others. This quite often then transferred into an incorrect justification, again limiting marks that candidates could access for the strength.

Question 5c

A number of candidates clearly identified a correct improvement of Bandura's (1961) Bobo doll experiment often referring to a more realistic setting for the children, extended age groups – then going onto clearly justify their answer in relation to ecological validity for example. The more able candidates who clearly understood the question went on to accurately justify the improvement they were suggesting – meeting both skill requirements of the question. Many candidates however did not fully develop their answers in terms of the justification of their improvement, which limited the marks they could be awarded.

Some candidates identified valid improvements of Bandura's study but expressed their answers in terms of weaknesses of the study rather than suggesting the improvement that could have been made. There seemed to be a lack of knowledge shown by some candidates who suggested improvements that were often confused with Bandura's other studies.

A few candidates provided generic answers with no application to Bandura (1961) study being referred to in their answer so it was difficult to credit as the improvement could have been related to a number of studies covered in the course.

Question 6a

Some candidates were able to describe "extinction" as a feature of classical conditioning for two marks. Most of these candidates provided answers which referred to the CR and CS association no longer being present. The most successful candidates then went onto add to their answer with an example – the most popular seen being Pavlov salivating dog's study. A

few students left this blank or confused the "extinction" term with other features from classical conditioning theory, gaining no marks.

Question 6b

Many candidates were able to grasp the A01 mark for identifying a strength and weakness of classical conditioning. They often referred to supporting evidence from Watson and Rayner (1920) Little Albert study for the strength and incomplete explanations/alternatives of learning for a weakness. Candidates sometimes went onto develop their justification mark as supporting classical conditioning as explaining new learned responses for example for the strength and for the weakness suggesting alternative explanations such as social learning theory of imitation/modelling and not through conditioned stimulus-response. Additional strengths quite often focused on application to therapies such as systematic desensitisation and for weaknesses the absence of free will as an alternative, the alternative of biological factors amongst others.

For many answers there was a lack of justification which did limit the number of marks that could be awarded to some candidates. In some cases, candidates provided genetic answers or answers that focused on strengths and weaknesses of studies and not classical conditioning theory.

There was a minority of candidates who left this question blank indicating that there may have been inconsistencies on time spent on other areas over this question.

Question 7

This was a discuss question that required candidates to demonstrate an equal emphasis between knowledge and understanding and application in their answer about the key question for society they had studied in learning theories.

Candidates were required to show knowledge and understanding of their key question of relevance to society and/ or individuals and link their points to appropriate theories, concepts and/ or research from learning theories.

Many candidates completed this really well in their response, those who did not achieve as highly often described their key question with limited discussion of the theoretical points or concepts from psychology. Alternatively, some candidates demonstrated some theoretical points and/or concepts from psychology but attempted limited knowledge and understanding of their key question to this.

A minority of students failed to identify their key question clearly at the beginning or within their answers.

A few described explanations or studies without a link to the key question itself. Better responses were seen in relation to eating disorders and media violence, with responses in relation to airlines treating the fear of flying often demonstrating over reliance on Capafóns with little development as a key question.

Question 8

This question yielded a great variety of answers in terms of candidate responses. Many candidates were able to apply the Alik and Joshua scenario in terms of both operant conditioning and the role of hormones in their behaviour. Candidate answers were not always

balanced with many writing more for operant conditioning than the role of hormones which resulted in an imbalanced awareness of competing arguments and conclusion.

Many candidates provided knowledge of A01 in relation to positive reinforcement, negative reinforcement and punishment and for hormones answers mainly focused on testosterone and cortisol. Application to the scenario was completed well for many candidates and they quite often embedded A01, A02 and A03 within their writing.

For some candidates A03 proved to be the most challenging requirement of the question with them providing no reference. When completed well for operant conditioning support came from Skinner's studies and for hormones Dabbs et al. Alternatives at times were applied well suggesting the boy's behaviour was due to social learning theory and observational learning. In relation to biological a few answers referred to brain functioning or evolutionary theory.

As a levels-based question, it was important to note that an A01/A02/A03 response was required. This needed to show an equal emphasis between knowledge and understanding versus application versus judgment and conclusion. Those candidates who scored highly on all skills were able to demonstrate accurate and thorough knowledge. They showed understanding of the extent to which both operant conditioning and hormones could explain and evaluate the boys behaviour. They applied this effectively to the scenario. This A01 knowledge was displayed with sustained application to the context. They displayed logical chains of reasoning embedded throughout their answers, not just as a standalone evaluation. This allowed such candidates to demonstrate an awareness of competing arguments throughout their answer, leading to a balanced response. The most-able candidates provided answers that did not only provide context-specific knowledge then evaluate what was being asked in the question. Rather, they demonstrated knowledge and evaluated through each statement or paragraph. This allowed candidates to access the balanced judgment/decision elements of the level banding quickly and efficiently.

Paper Summary Based on their performance on this paper, candidates are offered the following advice:

- Make sure that all key areas within the theory, studies, methods and practical sections are fully covered in preparation for any exam paper.
- Make sure that justification is provided within the questions to access A03 marks when required.
- When being asked about A02 – skill application to a specific context – it is important that responses are very clearly linked, to avoid generic answers.