Pearson Edexcel

Examiners Report
Principal Examiner Feedback

Summer 2024

Pearson Edexcel

GCE Psychology 8PS0/02

Paper 2: Biological Psychology and Learning Theories

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General Comments

Introduction:

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 question that covers both biological psychology and learning theories.

Candidates' overall coverage of both biological and learning was again 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 when accessing level based higher marks.

Skill application across both areas was comparable to previous years and reflected that candidates were prepared for most areas that the specification covers. 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 showed improvement for some and reflected a growing awareness that some candidates had of applying scenarios within their answers in a clearer format than previous series. It was disappointing to still read many answers which portrayed excellent knowledge and understanding of the question but failed to apply any areas asked for by the question, resulting in 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, continued refinement would support all moving forward.

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

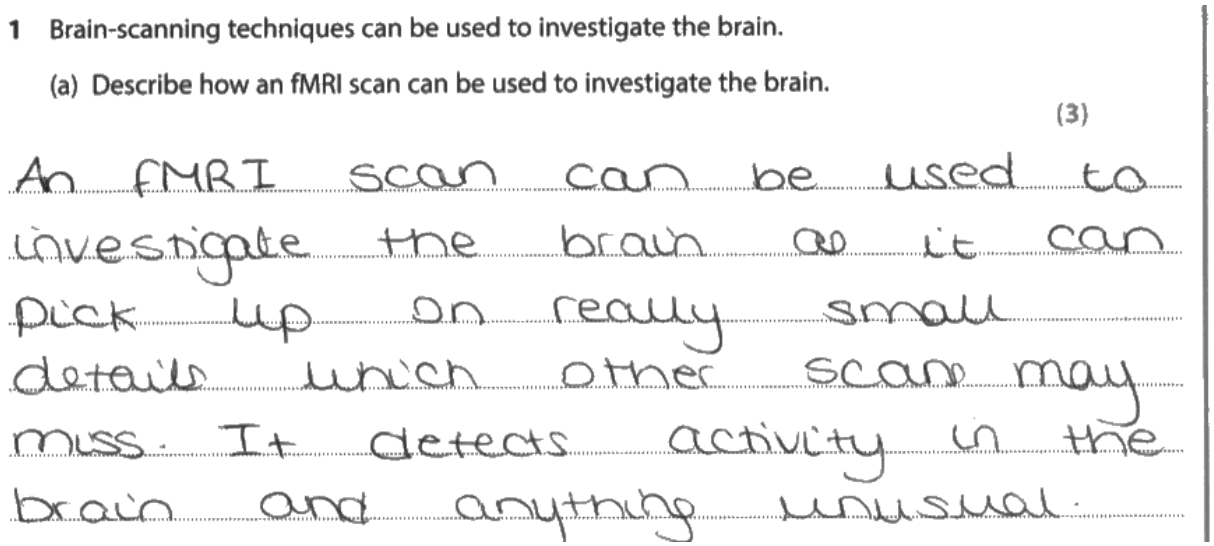
This aim is to highlight areas of good practice and illustrate some common errors, and thereby be used to help prepare candidates for future 8PS0 02 examinations.

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

Comments on Individual Questions and Examiner Tips

Q01a

Some candidates attempted to provide answers that described how an fMRI scan can be used to investigate the brain. Stronger responses were able to describe how an fMRI can measure blood flow whilst a person is completing a task and then extend this at times with additional knowledge about demand for oxygen or equivalent. Few candidates were able to describe how an fMRI scan can be used to investigate the brain for all three marks. There was some confusion with other scanning techniques – PET mostly, for some candidates.



1 Brain-scanning techniques can be used to investigate the brain.

(a) Describe how an fMRI scan can be used to investigate the brain.

(3)

An fMRI scan can be used to investigate the brain as it can pick up on really small details which other scans may miss. It detects activity in the brain and anything unusual.

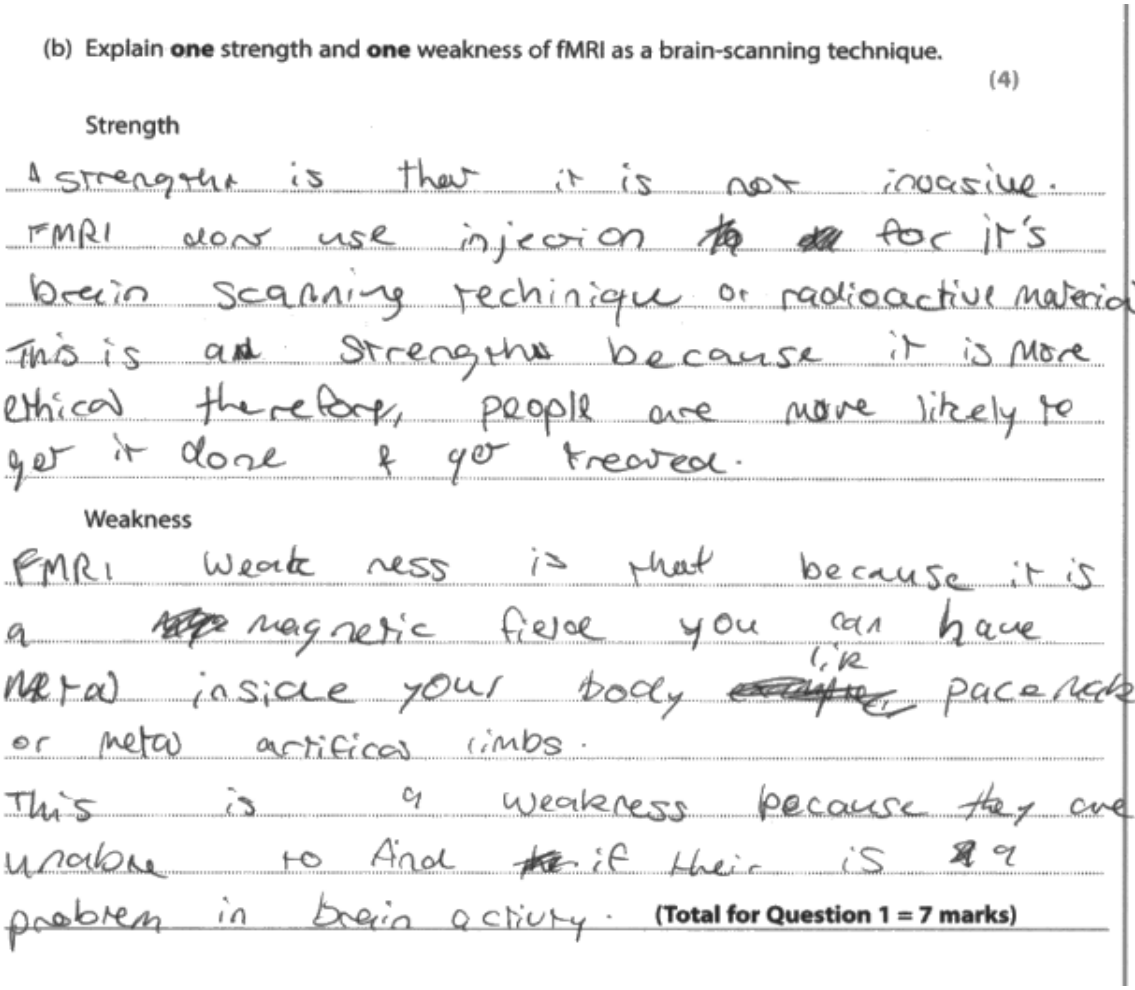
Examiner Tip:

This response gained 0 marks.
There is no credible knowledge of how an fMRI scan can be used to investigate the brain within the candidates answer.

Q01b

Candidates produced a variety of responses mostly focusing on one strength and one weaknesses of fMRI scans, however there was some confusion in candidate answers in the differences between fMRI, PET and CAT scanning techniques. Stronger candidate answers focused on the reliability of the technique, supporting evidence or application to psychological areas. Weaknesses were slightly stronger with comparisons to other scanning techniques or ethical issues such as distress.

At times candidates' answers were fully developed providing a thorough AO1 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 AO1 mark for the identification of the strength/weakness of the fMRI scan however justification was not expanded indicating a lack of understanding on the part of candidates. This meant that candidates could not always be awarded the AO3 mark as their answers did not have the elaboration to explain why it was an actual weakness.



(b) Explain **one** strength and **one** weakness of fMRI as a brain-scanning technique.

(4)

Strength

A strength is that it is not invasive. FMRI does use injection for it's brain scanning technique or radioactive material this is a strength because it is more ethical therefore, people are more likely to get it done & get treated.

Weakness

FMRI weakness is that because it is a magnetic field you can have metal inside your body i.e. pacemakers or metal artifical limbs.

This is a weakness because they are unable to find if their is a problem in brain activity. **(Total for Question 1 = 7 marks)**

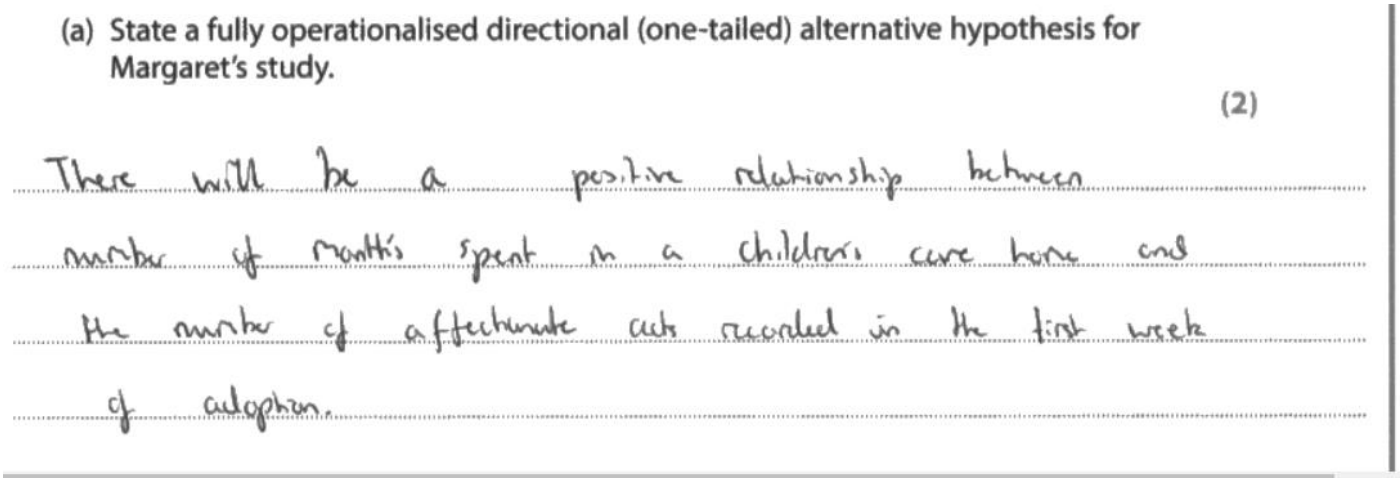
Examiner Comments

This response gained 2 marks.
The candidate has identified a strength and weakness of an fMRI a as brain-scanning technique, however, the candidate does not fully justify their answer for any additional marks.

Q02a

Candidates for this question provided a mixture of answers that were awarded marks accordingly. Marks were awarded according to the elements of the hypothesis for example stating, "a positive relationship" and operationalising one or more of the variables.

A significant number of responses from candidates were accurate, detailed and well operationalised, showing knowledge of a hypothesis inclusive of correlational variables. Candidates would have benefitted from ensuring that all parts of the hypothesis were fully operationalised, for example using "the number of months spent in a children's childcare". Some candidates provided an experimental hypothesis or variations, indicating "difference" or "effect".



(a) State a fully operationalised directional (one-tailed) alternative hypothesis for Margaret's study.

(2)

There will be a positive relationship between number of month's spent in a children's care home and the number of affectionate acts recorded in the first week of adoption.

Examiner Comments

The response gained 2 marks overall.
The candidate provides a directional (one-tailed) alternative hypothesis. The second mark comes from operationalising the variables e.g., "number of months a child spends in a care home" and number of affectionate acts record in the first week of adoption".

Q02b and Q02c

b. The majority of candidates were able to recognise that the graph required for this question was a scatter graph. Candidates had to state an appropriate title. The quality of titles produced by candidates varied, those who scored the mark were able to accurately state a title that incorporated an appropriate focus.

A significant number of candidates were able to do this; however, some titles were brief resulting in no marks being awarded for this part of the answer. A second mark was awarded for labelling the axes correctly, this like the title varied with some well-detailed axes from most candidates. The final mark was for the correct plotting of the data, some candidates found this difficult, at times plotting incorrectly.

Not all candidates made use of the graph paper and instead, plotted their graph in one small area; this is not recommended as it makes plotting the data difficult for the candidate. Candidates need to be careful when drawing and plotting data that both are accurate. A few candidates did not attempt this question at all, and some provided bar or line graphs which were not credited.

c. Most candidates recognised that there was a positive correlation. Only a minority of candidates did not attempt this question.

Examiner Comments

The response on the following page for part
b. gained 3 marks.
c. gained 1 mark.

The candidate produced an accurate title which is fully operationalised in terms of the type of variables that the plots on the graph are showing. The graph plots are correct in addition to the axes which are correctly drawn and labelled.

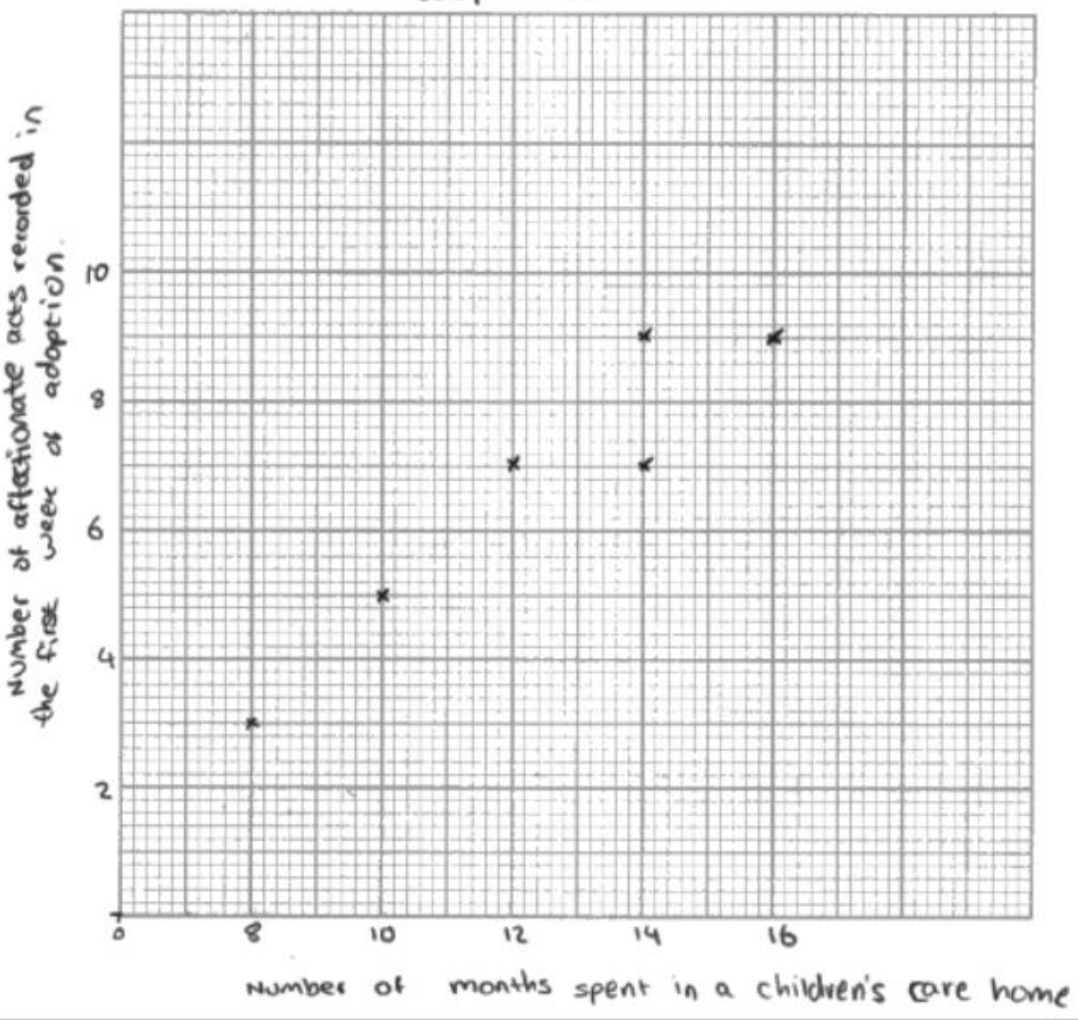
The candidate correctly identified for part c that there is “positive correlation” between the data.

(b) Draw a suitable graph to display the data in **Table 1**.

(3)

Title

A scattergraph to show the relationship between the number of months spent in a child's care home, and the number of affectionate acts in the first week of adoption.



(c) State the type of correlation shown in the graph you have drawn in 2(b).

(1)

Positive correlation.

Q02d

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 D^2 were completed correctly by many candidates, although inaccuracies in calculations meant candidates lost marks later in their answers. Only a minority of candidates did not attempt this question and centres must be congratulated on their continued hard work in ensuring their candidates are prepared for questions like this one.

(d) Complete **Table 2** and calculate Spearman's rank correlation coefficient for the relationship between the number of months spent in a children's care home and the number of affectionate acts recorded by the care worker in the first week of adoption.

(4)

Number of months spent in a children's care home	Rank 1	Number of affectionate acts recorded in a week	Rank 2	d	d^2
10	2	5	2	0	0
14	4.5	7	3.5	1	1
16	6	9	5.5	0.5	0.25
8	1	3	1	0	0
14	4.5	9	5.5	-1	1
12	3	7	3.5	-0.5	0.25
				Total:	2.5

$n = 6$

Table 2

SPACE FOR CALCULATIONS

① R1 - R2 = d
② d^2
③ formula

$1 - \frac{6\Sigma d^2}{n(n^2-1)}$

$1 - \frac{6 \times 2.5}{6(36-1)}$ $1 - \frac{15}{210}$

Spearman's rank correlation coefficient 0.929

Examiner Comments

The response gained 4 marks overall.
All four parts are correct, and the final answer is accurate.

Q02e

Some candidates were able to answer this question effectively by identifying a weakness of the quantitative data used by Margaret in relation to the scenario on affectionate acts. For many, they went onto develop a justification of quantitative data, with the most accurate answers having application to the scenario. Most candidates had knowledge of what quantitative data was, with only a minority confusing it with qualitative data.

The most successful candidates were able to identify quantitative data in terms objectivity or numerical data within the scenario of Margaret and then were able to justify this in terms of a lack of validity in relation to Margarets study on time spent in a children's care how and affectionate acts recorded. The most common error candidates made were to provide purely generic responses about quantitative data which did not meet the criteria of the question.

(e) Explain **one** weakness of Margaret using quantitative data for her study.

(2)

One weakness of ~~Margarete~~ Margaret using quantitative data for her study is that it does not provide a detailed insight into why children demonstrate acts of affection after living in a children's care home. It only provides a statistical overview.

Examiner Comments

This response gained 1 mark.
The candidate identified a weakness of Margaret's quantitative data lacking insight into why children demonstrate acts of affection but failed to justify their answer for an additional mark.

Q02f

Some candidates were able to identify at least one improvement for Margarets study, however many of these were either generic or not focused on the requirements of the question. Candidates were able to identify an improvement in relation to Margarets study, but quite often could not justify their answer for any further marks.

Several candidates provided answers that incorporated weaknesses of Margaret's study, the question clearly asks for one improvement – therefore could not be credited for their answers. Stronger candidates would apply their improvements to Margarets study, identifying one improvement on months spent in care homes and affectionate acts recorded. They then went onto justify their answers with reference to for example, population validity, ecological validity amongst other justification options.

(f) Explain **one** improvement that could be made to the sample gathered by Margaret for her study.

(2)

margaret could take a larger sample from a range of her colleges cases files so that the children are for and also children who have spent less so that her findings are generalisable to more children in care, not just the few that she see.

(Total for Question 2 = 14 marks)

Examiner Comments

This response gained 1 mark.
The candidate has identified an improvement in relation to taking a larger sample size from Margaret's colleagues' case files so generalisability is established. However, there is no justification mark, and the latter part of the answer develops into a weakness.

Q03

Many candidates provided answers for Raine et al. (1997) study. The most common and well answered tended to select sampling, matching of controls, validity and applications to society, amongst other points in their responses.

The best answers successfully incorporated AO1 and AO3 points throughout their answer, in addition to providing a balance of strengths and weaknesses in terms of Raine et al. (1997) study.

Some candidates' answers were affected by a lack of clear reference to A01 knowledge of Raine et al. (1997) study, either describing the study without reference to AO3 or evaluating the study without reference to the knowledge of Raine et al. (1997) study. Balance in some candidate answers again limited their level in addition to an absence of logical chains of reasoning which then could not always be presented in a balanced conclusion.

As a levels-based question, it is important to note that an AO1 / AO3 response was required which needed to show equal emphasis between knowledge and understanding versus evaluation and conclusion. Therefore, those candidates who scored highly on both skills were able to demonstrate accurate knowledge and understanding of Raine et al. (1997) study embedding knowledge of the study e.g., standardised controls, sample, results alongside representativeness, validity, scientific credibility, amongst others.

Examiner comments

The response on the following pages gained 6 marks.
A01 - Level 4 – demonstrates accurate knowledge and understanding.
A02 - Level 3 – developed chains of reasoning leading to a conclusion being presented, competing arguments with some balance.

A1 , A1 Aim sample - gen procedure - rel result - valid conclusion

3 Evaluate the classic study by Raine et al. (1997). (8)

The aim of Raine's study was to investigate whether there was a difference in brain activity in ~~the~~ murderers and non-murderers.

Raine use a sample of 41 murders ~~and~~ in which had 39 ~~men~~ males and 2 female and 41 non-murders as the control group. The 41 murders pleaded not guilty with the reason of insanity in which 23 had mental problems, 6 had schizophrenia, 2 had epilepsy and 7 had emotional problems. In the control group, 6 had schizophrenia in which were matched with the 6 in the experimental group. This sample can have high generalisability due to it being the largest sample of 82, this could mean that anomalies such as brain structure may not skew the data too much, however there is lack due to the unusual state of the murders so cant be generalised to typical murders).

~~He~~ conducted ~~used~~ a baseline for brain activity then Raine performed a 32 minute continuous task performance in which involved having to sequence blurred number and different strategies. This was undertook by all participants. ~~The~~ Then ~~He~~ a PET scan was performed - The findings

Show that murders had lower glucose levels in their prefrontal cortex and in the corpus callosam. This is as the murders had 0.56 and the non-murders having 0.68.

The procedure may have low ecological validity as the continous performance task can be seen as artificial and not a true representation of real life due to the unusual tasks. However the results that concluded from this show construct validity as Buffkin and Lutrell * used meta-analysis for 17 studies including raine in terms activity and aggression and found that prefrontal deficit can infact lead to impulsivity.

In conclusion Raine's research was beneficial in following the BPS ethical guidelines as fully informed consent taken from all, especially NGRIS due to the belief it will help their court case to show they weren't in control. Raine's study supports the idea that deficit in the Prefrontal cortex and corpuscallosum impacts rational behaviour, resulting aggression.

(Total for Question 3 = 8 marks)

Q04

Some candidates answered this question well in terms of being able to describe behaviour shaping for one mark. Many candidates struggled to elaborate their answers to fulfil the requirements of a two-mark answer. Some candidates were able to describe behaviour shaping in terms of reinforcing behaviours through successive approximations that would not usually occur, or words to that effect.

Few were able to add to this with knowledge e.g., of the step-by step process until the desired behaviour was achieved. Moving forwards candidates would benefit from additional review of key terminology from the specification, especially those more challenging ones.

Learning Theories

4 As part of operant conditioning, you will have learned about behaviour modification, including 'shaping'.

Describe what is meant by behaviour shaping.

behaviour shaping ~~is~~ ~~re~~. uses reinforcement ~~to~~ successive approximations to reach a targets behaviour.

Examiner Comments

This response gained 1 mark.
There is a clear description of behaviour shaping through successive approximations for one mark. There is no additional description of behaviour shaping for the second mark.

Q05a

Many candidates were able to make reference to the Winston context showing a clear understanding of AO2 questions and application needed for marks. Lots of candidates referred to the turbulence on the aeroplane producing an unconditioned fear response (UCR). The pairing of the aeroplane (NS) with the turbulence caused by the storm creates a (CR) of fear.

A minority of candidates failed to include the Winston context in their answer, often providing answers with reference to classical conditioning procedure/theory. Occasionally candidates included supporting research from Pavlov salivating dog study or other strengths / weaknesses of classical conditioning theory within their answers. Generally, candidates were aware of the classical conditioning theory/procedure however some candidates confused the different elements or areas from within the scenario therefore resulting in answers that were incorrect.

5 Winston is afraid of storms. During a recent work trip, Winston experienced several hours of turbulence caused by the aeroplane flying through a storm. As the aeroplane bumped around, many of the passengers began to scream and some bags fell out of the overhead lockers. This trip scared Winston and he has developed a phobia of flying.

(a) Using classical conditioning, describe how Winston developed a phobia of flying.

(4)

Winston may have developed his phobia through association of a different phobia. For example, Winstons plane was flying through a storm, which he was previously afraid of. Winston may have also developed this phobia through his own experience, in this case Winston experienced the aeroplane bumping around which may have triggered his phobia of flying. Winston also experienced many of the other passengers scream in response to the turbulence and therefore may mean he has learned and imitated their behaviour and developed a phobia.

Examiner Comments

This response gained 0 marks.
There is no clear description of classical conditioning in relation to Winston's phobia of flying.

Q05b

Many candidates attempted this question with some success in terms of providing two weaknesses of classical conditioning. A minority of candidates correctly identified weaknesses of classical conditioning and then went on to justify their answer for the full marks.

Some candidates were able to provide an identification and justification of a weakness of classical conditioning or identifying two weaknesses but did not justify for additional marks on one or either. A minority of candidates provided weaknesses for social learning theory and/or operant conditioning therefore could not be credited. The most successful candidates referred to contradictory evidence, reductionism, alternative biological theories, amongst others.

(b) Explain **two** weaknesses of classical conditioning.

(4)

1 classical conditioning says that you can only learn something if you pair two things together and doesn't take into account that you can learn through operant conditioning which is learning through consequences.

2

(Total for Question 5 = 8 marks)

Examiner Comments

This response gained 1 mark.
One mark for identification of one weakness of classical conditioning in comparison to operant conditioning, justification is not developed for the second mark.

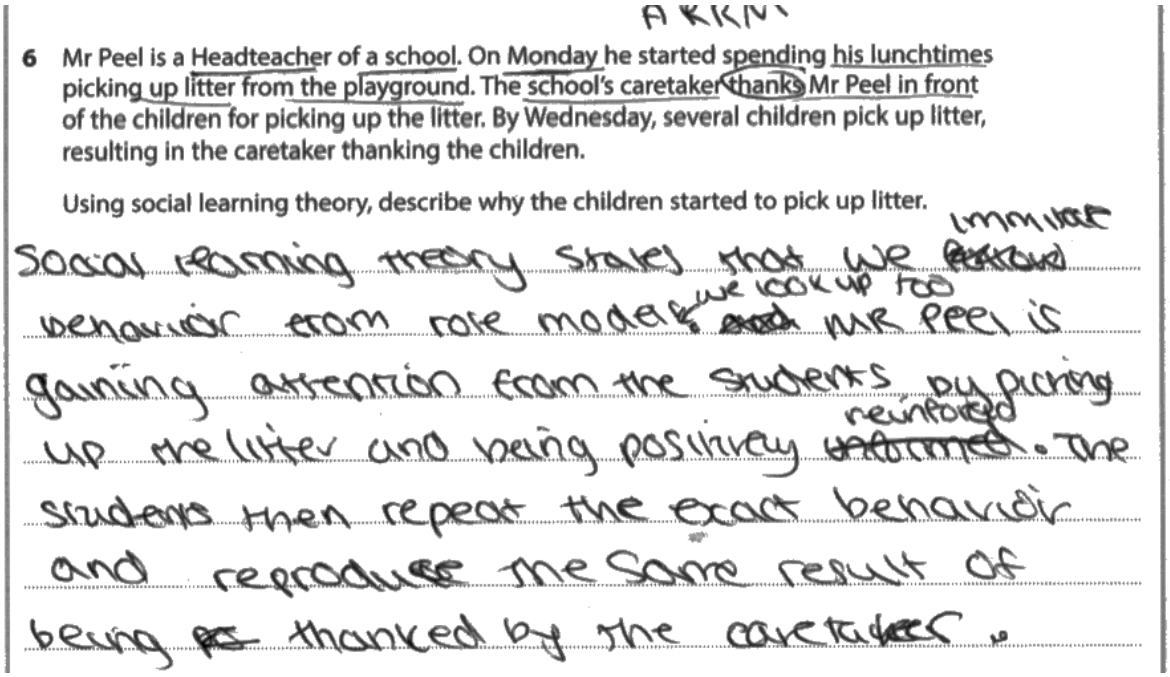
Q06

The majority of candidates attempted this question with some success. Most candidates were able to make reference to the Mr Pickering scenario, showing a clear understanding of AO2 questioning. Lots of candidates referred to the children observing Mr Peel picking up the litter in terms of him being a role model.

More successful candidates were able to develop this further in terms of the children reproducing the picking up of litter as there would have been litter in the playground. There was usually some additional success in terms of the children retaining the litter picking behaviour and/or finally being motivated by the prospect of being thanked as part of vicarious reinforcement.

A minority of candidates failed to include Mr Peel or the children from the scenario in their answer, most often providing answers with reference to social learning theory itself.

Occasionally candidates included in their answers supporting evidence from Bandura's studies or other strengths/weaknesses, showing confusion of the question requirements. A few candidates focused solely on one element of social learning theory within their answers, for example - role models, which did limit what they could be awarded. It did seem that, for some, there was a lack of knowledge of key elements of social learning theory beyond role models and observation.



6 Mr Peel is a Headteacher of a school. On Monday he started spending his lunchtimes picking up litter from the playground. The school's caretaker thanks Mr Peel in front of the children for picking up the litter. By Wednesday, several children pick up litter, resulting in the caretaker thanking the children.

Using social learning theory, describe why the children started to pick up litter.

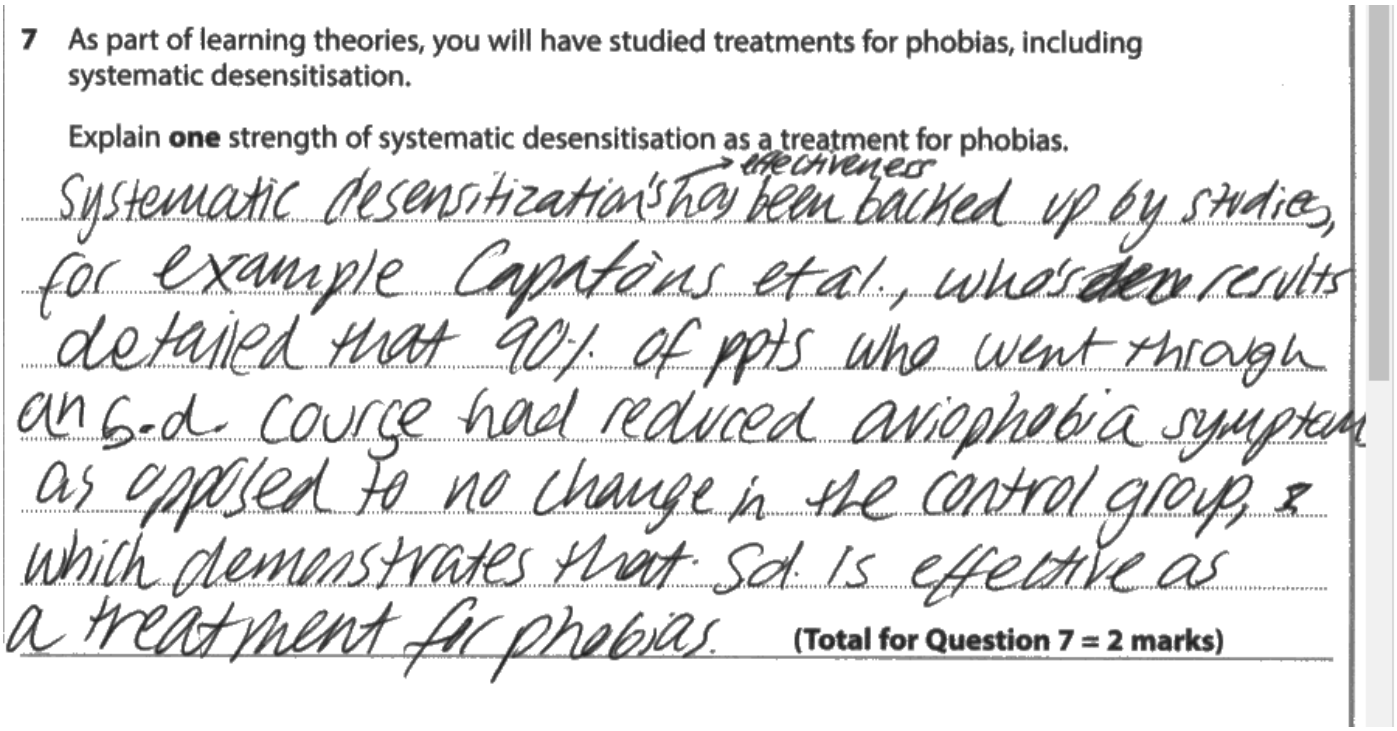
Social learning theory states that we imitate behaviour from role models we look up to. MR Peel is gaining attention from the students by picking up the litter and being positively reinforced. The students then repeat the exact behaviour and reproduce the same result of being thanked by the caretaker.

Examiner Comments

This response gained 2 marks.
The candidate begins with a definition of imitation but does not clearly link this to Mr Peel. There is a clear mark when Mr Peel gains attention by picking up the litter. This is then developed into the last sentence gaining a further mark through reproducing of being thanked by the caretaker.

Q07

The majority of candidates were able to provide a partial answer for this question but did not always justify their response for full marks. Lots of candidates provided a strength which was not specific to systematic desensitisation as a treatment for phobias, often lacking clear knowledge of systematic desensitisation itself. Most answers referred to supporting evidence, applications to society, amongst others.



7 As part of learning theories, you will have studied treatments for phobias, including systematic desensitisation.

Explain **one** strength of systematic desensitisation as a treatment for phobias.

Systematic desensitization's (effectiveness) has been backed up by studies, for example Captains et al., who's ~~dem~~ results detailed that 90% of ppts who went through an S.d. course had reduced aviophobia symptom as opposed to no change in the control group, ✗ which demonstrates that S.d. is effective as a treatment for phobias.

(Total for Question 7 = 2 marks)

Examiner Comments

This response gained 2 marks.
The candidate clearly identified and justified a relevant weakness of systematic desensitisation as a treatment of phobias.

Q08a

Candidates answered this question well in terms of being able to describe covert observation in relation to Theresa's study of children's colour preferences. Only a minority of candidates did not attempt this question or provided a completely generic response. A few candidates confused covert observation with overt observation. Moving forwards clarifying key terminology for some might support scenario-based questions such as this one.

8 Theresa wanted to investigate children's colour preferences. She placed green and orange bucket and spade sets at the entrance to a beach, with a sign saying, "Free for children to use". Theresa sat out of sight and observed which coloured sets the children picked up when entering the beach.

Theresa's results are shown in **Table 3**.

Gender of child	Green bucket and spade set	Orange bucket and spade set
Boys	5	2
Girls	3	4

Table 3

(a) Identify the type of observation used by Theresa in her investigation.

(1)

covert observation; the children aren't aware that they're being observed.

Examiner Comments

This response gained 1 mark.
One marks of identification of the type of observation used by Teresa.

Q08b

Many candidates attempted this question with some success in terms of providing a strength/weakness of the observation being used in Teresa's observation on children's colour preferences. Some candidates correctly identified a strength/weakness of the observation but failed to make links to the Teresa scenario into children's colour preferences, therefore providing generic responses.

Candidates who did provide clear reference to the Teresa observation on children's colour preferences did not always go on to justify their weaknesses in full for additional marks. The most successful candidates referred clearly to the positioning of the observer, standardised controls amongst others – focusing on Teresa's observation. These were then sometimes successfully related to validity, amongst other acceptable points.

(b) Explain **one** strength and **one** weakness of Theresa using an observation for her investigation into children's colour preferences.

(4)

Strength

A structured observation can be good because it's easily understood and often tallied, meaning it's ~~quantity~~ nominal and hard to be shifted ~~do~~ due to false perceptions.

Weakness

Having an overt observation means it is more controlled, however it also means that it lacks ecological validity and could result in data being collected based on the perception of the participant.

(Total for Question 8 = 5 marks)

Examiner Comments

This response gets 0 marks.
There were no links to any part of Teresa's observation in the strength/weakness so no marks can be awarded for those areas that were correct.

Q09

Many candidates provided good answers for an evaluation of Bandura's (1965) Bobo doll experiment with vicarious reinforcement. The most common and well-developed answers tended to show key areas of this particular study by Bandura making explicit differences to this study. Some candidates wrote about other Bandura studies or muddled areas of the studies e.g., sampling. Very few candidates did not attempt this question.

The most successful candidates incorporated AO1 and AO3 points throughout their answer, in addition to providing a balance of strengths and weaknesses in terms of aspects of Bandura's (1965) Bobo doll experiment with vicarious reinforcement. Some candidates' answers were affected by a lack of clear reference to AO1 knowledge of Bandura's (1965) Bobo doll experiment with vicarious reinforcement study and/or a lack of justification of AO3 specifically linked to the answer being provided by the candidate.

Balance in some candidate answers limited their level in addition to an absence of coherent chains of reasoning which then could not always be presented in a balanced conclusion.

As a levels-based question, it is important to note that an AO1 / AO3 response was required which needed to show equal emphasis between knowledge and understanding versus evaluation and conclusion. Therefore, those candidates who scored highly on both skills were able to demonstrate accurate knowledge and understanding of Bandura's (1965) Bobo doll experiment with vicarious reinforcement.

Examiner comments

The response on the following pages gained 3 marks.
AO1 - Level 1 – demonstrates isolated knowledge and understanding of Bandura's (1965) Bobo doll experiment with vicarious reinforcement.
AO2 Level 2 – statement with some development in the form of mostly accurate and factual material, leading to a superficial conclusion.

9 Evaluate Bandura's (1965) Bobo doll experiment with vicarious reinforcement.

(8)

Bandura used 62 children from Stamford University Nursery in his 1965 study. He split the children into multiple groups of 6. The sample size is therefore large overall, giving the study good generalisability, but the group sizes are small, meaning there's a risk of anomalies skewing the data.

Bandura ~~[illegible]~~ measured the children's reactions to witnessing the model, 'Rocky', being punished or rewarded for hitting the Bobo Doll as well as a control group who didn't witness vicarious reinforcement. This shows that it was a laboratory experiment, the control group increasing the internal validity. However lab experiments are highly artificial and may not relate to reality, making the experiment lack ecological validity.

Also, Bandura measured the number of violent acts the child imitated with a point scale, stating different types of violence, such as verbal, or incentive. This means that the study's results use quantitative data, which is highly objective and scientific, which further adds to the experiment's reliability.

However, Bandura's experiment exposed aggressive behaviour such as sitting on the Bobo Doll and punching it, and giving children an incentive to copy 'Rocky'. This breaches the BPS code of ethics, as it ~~raises~~ normalises unhelpful behaviour and may lead to long-term behavioural issues in the children.

overall, Bandura's study is a highly valid study that provided a larger insight in behaviour and learning. However it was largely unethical, which may outweigh the benefit in the cost v benefit ~~ben~~ debate ~~of~~ in deciding if the results, and validity, of the study, are more important than the ethical implications.

Q10

The majority of candidates were able to attempt this question with some success. In terms of each theory operant conditioning was well attempted with knowledge reference to positive reinforcement, negative reinforcement, punishment; being mostly accurate. For some candidate's coverage of hormones was good, with strongest candidates referring to testosterone, lesser so with cortisol and other hormones.

Many candidates were able to not only demonstrate knowledge of either hormones or operant conditioning and then follow this with justification AO3 marks from supporting studies, alternative explanations, lack of credible evidence, amongst others. Some provided knowledge without additional justification or alternatively supporting evidence for example without accurate and thorough understanding of the area.

There was some confusion in answers, with candidates providing 'evaluate' answers instead of 'to what extent' which requires a balanced judgment / decision within the answer. This is not exclusive to the conclusion for explain but can be embedded throughout the answer for effectiveness. There were a few candidates who provided detailed and thorough knowledge of both areas and developed their answers into balanced judgements and decisions.

Occasionally, candidates did not finish their answers to this question which may indicate timing issues for some. This was even more apparent in answers that provided an excellent overview of operant conditioning as an explanation for human behaviour but did not provide the same quality for hormones – or vice versa.

As a level-based question, it is important to note that an AO1 / AO3 response was required which needed to show an equal emphasis between knowledge and understanding versus judgement and conclusion. Those candidates who scored highly on both skills were able to demonstrate accurate and thorough knowledge and understanding of hormones and operant conditioning. This AO1 knowledge was displayed with logical chains of reason throughout their answers, not just in the second half of the essay. This, therefore, allowed these candidates to demonstrate an awareness of competing arguments throughout their answer, enabling them to provide a balanced response. The most able candidate answers embedded this in addition to providing an effective nuanced and balanced judgment within answers, allowing access to top band marks.

Examiner Comments

This response gained 5 marks.
A01 – Level 2 demonstrated mostly accurate knowledge and understanding.
A03 – Level 3 developed arguments using mostly coherent chains of reasoning leading to somewhat of a judgement/decision which has some imbalance.

10 To what extent do operant conditioning and hormones explain human behaviour?

(12)

Operant conditioning can explain human behaviour in terms of learning. It explains how ~~peep~~ target behaviour can be increased/decreased by using reinforement and punishment. Operant conditionong is supported by Skinner. Skinner tested on mice, rats and more to see if behaviour is affected based on the situation. For example Skinner introduced positive reinforcement (an element of operant conditioning) by giving the rats food everytime they prassed the lever. this increased target behaviour, of pressing the lever. He also introdured negative reinforcement by giving the rats electric shots that would go away by pressing the lever. this also increased target behaviour. Operant conditiong is supported by skinner to explain human behaviour.

However, skinner used animals in his experiment, which raises the question of whether it can be applied to humans or not.

Hormones can also be used to explain human behaviour. For example, testostereone (the male sex hormone). If testosterone levels increase,

aggression levels also increase. This leads to the assumption of boys being more aggressive than girls to be mostly true. Another hormone that can be used to explain human behaviour is cortisol. Cortisol is the stress hormone, and if cortisol levels are low then aggression levels increase.

~~[illegible]~~

However, hormones are a single factor that affect human behaviour but it doesn't explain brain structures which may also be a factor for human behaviour.

In conclusion, both operant conditioning and hormones can be used to explain human behaviour. Although may be argued that they are reductionist and do not take everything into account, they both still manage to explain human behaviour to an extent whilst being supported by Skinner for example, and Bandura.

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, especially key terminology.

• 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.

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