



ASSESSMENT and  
QUALIFICATIONS  
ALLIANCE

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# Mark scheme January 2004

## GCE

### Psychology A

### Unit PYA3

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**UNIT 3****QUALITY OF WRITTEN COMMUNICATION (QoWC)**

|                |  |
|----------------|--|
| <b>2 marks</b> | The work is characterised by the <b>ACCURATE</b> and <b>CLEAR</b> expression of ideas, a <b>BROAD RANGE</b> of specialist terms and only <b>MINOR ERRORS</b> in grammar, punctuation and spelling. |
| <b>1 mark</b>  | The work is characterised by a <b>REASONABLE</b> expression of ideas, the use of a <b>REASONABLE RANGE</b> of specialist terms and <b>FEW ERRORS</b> of grammar, punctuation and spelling.         |
| <b>0 marks</b> | The work is characterised by a <b>POOR</b> expression of ideas, <b>LIMITED USE</b> of specialist terms and <b>POOR</b> grammar, punctuation and spelling.  |

**ASSESSMENT OBJECTIVES ONE, TWO AND THREE**

|            |   |
|------------|---|
| <b>AO1</b> | Assessment objective one = knowledge and <i>understanding</i> of psychological theories, terminology, concepts, studies and methods and communication of knowledge and understanding of psychology in a clear and effective manner.                             |
| <b>AO2</b> | Assessment objective two = analysis and <i>evaluation</i> of psychological theories, concepts, studies and methods and communication of knowledge and understanding of psychology in a clear and effective manner.  |
| <b>AO3</b> | Assessment objective three = <i>design, conduct</i> and <i>report</i> psychological investigation (s) choosing from a range of methods, and taking into account the issues of reliability, validity and ethics, and collect and draw conclusions from the data. |

**SECTION A - SOCIAL PSYCHOLOGY****1****Total for this question: 30 marks**

|   |
|---|
| (a) (i) What is meant by the terms majority influence (conformity) and minority influence?<br>(2 marks + 2 marks) |
| (ii) Give <b>one</b> difference between the terms majority influence and minority influence.<br>(2 marks)         |

**Marking criteria**

The term 'majority influence' refers to a type of social influence where an individual's attitudes, opinions and behaviour are affected by the attitudes, opinions and behaviour of the group – the majority. This influence is caused by group pressure to follow the group norms.

'Minority influence' refers to the type of social influence when a deviant group of people, or individual, with a position that differs from the norm/majority, are able to persuade an individual (or group) to change their attitudes, beliefs or behaviour. In this case the influence is due to persuasion or conversion.

**Marking allocation**

For each term:

|                |  |
|----------------|--|
| <b>2 marks</b> | Explanation of each term is both <b>accurate</b> and <b>detailed</b> . For example, the candidate may offer a detailed and accurate account of the term, such as given in the marking criteria.          |
| <b>1 mark</b>  | Explanation of each term is <b>basic, lacking detail</b> , and may be <b>muddled</b> and/or <b>flawed</b> . For example, the candidate may offer only a brief and/or lay interpretation of the term.     |
| <b>0 marks</b> | Explanation of each term is <b>inappropriate</b> (for example, the candidate may describe a research study of majority influence rather than defining the term) or the explanation is <b>incorrect</b> . |

One of the differences between the two is that majority influence may result in public compliance but not in private acceptance, while minority influence results in a change in both public and private compliance. Another difference is that majority influence involves large numbers of people, while minority influence tends to involve smaller numbers.

If a candidate has used the concept for their definition in part (i) it cannot also receive credit in part (ii), unless there is some attempt to show a difference; when on its own would receive 1 mark. However, it may be possible to export part of their answer from one part to the other if this benefits the candidate, but material should not be double-credited.

**Marking allocation**

|                |  |
|----------------|--|
| <b>2 marks</b> | Explanation of the difference is both <b>accurate</b> and <b>detailed</b> . For example, the candidate may offer a detailed and accurate account of the difference, such as give an example of the 'lot of people' in sufficient detail for 2 marks.                           |
| <b>1 mark</b>  | Explanation of the difference is <b>basic, lacking detail</b> , and may be <b>muddled</b> and/or <b>flawed</b> . For example, the candidate may offer only a brief and/or lay interpretation of the difference, such as saying that there are different numbers in the groups. |
| <b>0 marks</b> | Explanation of the difference is <b>inappropriate</b> or the explanation is <b>incorrect</b> .   |

|  |
|--|
| (b) Explain <b>two</b> ethical issues that have arisen in social influence research. (3 marks + 3 marks) |
|--|

### Marking criteria

There are several ethical issues that candidates may offer, but the most likely ones are those identified on the specification; e.g. deception, informed consent and the protection of participants from psychological harm. However, other ethical issues (such as confidentiality, the need for privacy etc) are also relevant as long as they could be relevant to social influence research. There is no requirement to make the link to social influence research explicit.

Debriefing is not an ethical issue; it is a way of dealing with issues such as deception and lack of informed consent. However, examiners should look carefully at the answers, candidates may have made a case for the need to debrief as a result of having done something unethical. Thus there may be some relevant material.

### Marking allocation

For each issue:

|                |   |
|----------------|---|
| <b>3 marks</b> | Explanation of each issue is both <b>accurate</b> and <b>detailed</b> . For example, the candidate has given an outline of deception, which shows <i>why</i> this is an important issue (e.g. it prevents fully informed consent being given, makes participants distrustful of future research participation etc). |
| <b>2 marks</b> | Explanation is <b>limited</b> . It is <b>generally accurate</b> but <b>less detailed</b> . For example, the candidate may give a less detailed outline, which shows weak or no understanding of <i>why</i> this is an important ethical issue.  |
| <b>1 mark</b>  | Explanation is <b>basic</b> , <b>lacking detail</b> , and may be <b>muddled</b> and/or <b>flawed</b> . For example, candidates merely identify the issue, e.g. deception.   |
| <b>0 marks</b> | Explanation is <b>inappropriate</b> (for example, the candidate has described some procedures of a study that has been considered unethical) or the explanation is <b>incorrect</b> .   |

- |   |
|---|
| (c) Briefly outline <b>one or more</b> studies of obedience to authority and consider whether such studies could be considered ecologically valid. (18 marks) |
|---|

### Marking criteria

In this part of the question the **AO1** criteria is satisfied by an outline description of one or more studies of obedience. This may relate to any aspects of the study (aims, procedures, findings and/or conclusions); but should have the potential to relate to ecological validity.

**AO2** criteria consist of a consideration of whether such studies are ecologically valid; i.e. whether findings can be applied to other settings.

There are numerous appropriate studies that candidates might offer, but those identified on the specification are likely to be the most common; e.g. Milgram, Hofling et al., Meeus & Raaijmakers. It is also possible for candidates to consider Zimbardo's prison simulation, provided they make it clear that it involved the prisoners obeying the guards.

The commentary comes from a consideration of whether such studies were ecologically valid. One of the main criticisms faced by Milgram was that his study lacked ecological validity (Orne & Holland), that the situation was not realistic to the participants (internal validity) and that this in turn affected their behaviour. One of the strengths of Hofling et al's study was that it was conducted in the real world and thus was high in ecological validity. However, there have been criticisms (Rank & Jacobson) of Hofling et al, that the situation the nurses found themselves in was unrealistic and unlikely to occur in the real world. The findings also were not replicated, unlike Milgram's findings, which were replicated both in the US and in other countries. Thus it is possible to argue that in fact Milgram's findings can actually be claimed to have ecological validity whereas Hofling et al's do not. Similarly, Zimbardo's prison simulation study has not been replicated, although it could be possible for candidates to argue that Haslam's recent study "The Prison" is a replication of Zimbardo's study in a different setting, thus providing some evidence of ecological validity (although the recent study also challenges Zimbardo's findings).

A broad definition of what is meant by the term ecological validity can be accepted. It refers to the extent to which the findings of a study can be generalised beyond the immediate setting in which the research took place. This includes whether or not the study can be generalised to the real world (i.e. a type of external validity).

There is a depth/breadth trade-off: answers that consider more than one study may necessarily do so with less depth. Examiners should bear this in mind when assessing AO1 marks.

Candidates may introduce further material as a form of commentary/evaluation i.e. they have just selected material and described it, but it is not relevant to AO1 and not credited as such. The degree to which candidates use this material as part of a critical commentary, will constitute the *effectiveness* of the evaluation and hence the number of marks awarded for AO2. Candidates who offer no commentary may still be judged to have selected appropriate material and thus commentary can be described as 'just discernible'. This additional material can receive some AO2 credit because it has 'AO2 potential'.

**Marking allocation****AO1**

|                  |  |
|------------------|--|
| <b>6-5 marks</b> | Outline of one or more studies of obedience is both <b>accurate</b> and <b>detailed</b> . For example, the candidate has outlined one study in detail or more studies in less detail (although there will be a breadth/depth trade off here).                                |
| <b>4-3 marks</b> | Outline of one or more studies of obedience is <b>limited</b> . It is <b>generally accurate</b> and/or <b>less detailed</b> . For example, the candidate has outlined the studies briefly, without providing much detail, or has outlined one study in slightly more detail. |
| <b>2-1 marks</b> | Outline of one or more studies of obedience is <b>basic, lacking detail</b> , and may be <b>muddled</b> and/or <b>flawed</b> . For example, the candidate has probably outlined only one study basically or several studies but all muddled.                                 |
| <b>0 marks</b>   | Outline of one or more studies of obedience is <b>inappropriate</b> (for example, the candidate may outline studies that do not relate to obedience) or the description is <b>incorrect</b> .  |

**AO2**

|                    |  |
|--------------------|--|
| <b>12-11 marks</b> | There is an <b>informed commentary</b> on whether such studies are ecologically valid and <b>reasonably thorough analysis</b> of relevant psychological material, which has been used in an <b>effective</b> manner, within the time constraints of answering this part of the question. |
| <b>10-9 marks</b>  | There is a <b>reasonable commentary</b> on whether such studies are ecologically valid and <b>slightly limited analysis</b> of relevant psychological material, which has been used in an <b>effective</b> manner.   |
| <b>8-7 marks</b>   | There is a <b>reasonable commentary</b> on whether such studies are ecologically valid but <b>limited analysis</b> of relevant psychological material, which has been used in a <b>reasonably effective</b> manner.  |
| <b>6-5 marks</b>   | There is a <b>basic commentary</b> on whether such studies are ecologically valid with <b>limited analysis</b> of relevant psychological material, which has been used in a <b>reasonably effective</b> manner.  |
| <b>4-3 marks</b>   | There is <b>superficial commentary</b> on whether such studies are ecologically valid and <b>rudimentary analysis</b> of relevant psychological material. There is <b>minimal interpretation</b> of the material used.   |
| <b>2-1 marks</b>   | Commentary on the ecological validity of the studies is <b>just discernible</b> (for example, through appropriate selection of material). Analysis is <b>weak</b> and <b>muddled</b> . The answer may be <b>mainly irrelevant</b> to the problem it addresses.                           |
| <b>0 marks</b>     | Commentary is absent or <b>wholly irrelevant</b> to the problem it addresses.  |

2

**Total marks for this question: 30 marks**(a) Give **two** explanations of why people yield to minority influence. (3 marks + 3 marks)**Marking criteria**

Moscovici distinguished between compliance and conversion and suggested that it is through conversion that the minority can influence the majority. People are most likely to yield to the minority when it is:

- Consistent (i.e. consistent in its opinions);
- Flexible (i.e. not unbending, rigid and dogmatic);
- Committed (i.e. focused, enthusiastic and has invested in its views).

There are also several theories that explain why people yield to the minority: snowball effect; self-categorisation theory and the theory of social impact. Each of these could be presented as one explanation, or subdivided into several explanations.

**Marking allocation**

For each explanation

|                |   |
|----------------|---|
| <b>3 marks</b> | Explanation is both <b>accurate</b> and <b>detailed</b> . For example, the candidate may offer a detailed and accurate explanation of why people yield possibly using psychological terminology, or with reference to explicit theory or study. |
| <b>2 marks</b> | Explanation is <b>limited</b> . It is <b>generally accurate</b> but <b>less detailed</b> . For example, the candidate may offer a less detailed but generally accurate explanation of why people yield.   |
| <b>1 mark</b>  | Explanation is <b>basic, lacking detail</b> , and may be <b>muddled</b> and/or <b>flawed</b> . For example, merely identifying a condition (e.g. consistency).  |
| <b>0 marks</b> | Explanation is <b>inappropriate</b> (for example, the candidate may offer an explanation of why people yield to majority influence) or the explanation is <b>incorrect</b> .  |

|  |
|--|
| (b) Describe the aims and procedures of <b>one</b> study of majority influence (conformity). (6 marks) |
|--|

### Marking criteria

There are several studies that candidates may select, but it is most likely that they will choose one of those mentioned on the specification (i.e. Sherif, Asch, Zimbardo). However, other studies of majority influence are also acceptable (e.g. Crutchfield, Jenness). The question explicitly asks for aims and procedures, so no credit should be given for findings or conclusions. Candidates do not need to cover both the aims and the procedures in equal depth to achieve high marks, but they do need to explicitly consider the aims. For example, Asch's aims were to determine whether, with an unambiguous task, a naïve participant could be influenced to knowingly give the wrong answer. Zimbardo's aims were to study majority influence through a role-playing exercise. He also wanted to determine whether conformity was due to dispositional or situational factors. Candidates must make Zimbardo's aims explicitly relevant to conformity.

Candidates who describe more than one study should have all of them marked and the best one credited. Note that variations of Asch's studies can be counted as one study.

### Marking allocation

|                  |   |
|------------------|---|
| <b>6-5 marks</b> | Description of the aims <i>and</i> procedures of a study of majority influence is both <b>accurate</b> and <b>detailed</b> . For example, the candidate has covered aims and procedures but not necessarily in the same amount of detail.   |
| <b>4-3 marks</b> | Description of the aims <i>and</i> procedures of a study of majority influence is <b>limited</b> . It is <b>generally accurate</b> but <b>less detailed</b> . Alternatively, description of <i>either</i> the aims <i>or</i> procedures of the study is accurate and detailed.                            |
| <b>2-1 marks</b> | Description of the aims <i>and</i> procedures of a study of majority influence is <b>basic</b> , <b>lacking detail</b> , and may be <b>muddled</b> and/or <b>flawed</b> . Alternatively, description of <i>either</i> the aims <i>or</i> procedures of the study is generally accurate but less detailed. |
| <b>0 marks</b>   | The description of the aims or procedures is <b>inappropriate</b> (for example, the candidate has described a study which was not concerned with majority influence) or the description is <b>incorrect</b> .   |



|  |
|--|
| (c) Outline and evaluate how psychologists have dealt with ethical issues (e.g. the use of ethical guidelines).<br><span style="float: right;">(18 marks)</span> |
|--|

### Marking criteria

In this part of the question the **AO1** criteria are satisfied by an outline description of how psychologists have dealt with ethical issues.

**AO2** criteria consist of the effective use of material to consider the extent to which psychologists have dealt with such issues.

Ethical issues involve the use of deception, the potential harm that participants may suffer, participants inability to give their informed consent and the quality of the debriefing given. No credit for describing issues. One of the ways in which psychologists have dealt with such issues is by developing a set of guidelines.

There is no requirement to set the discussion in the context of any study. Candidates could simply consider the ethical guidelines or use of ethical committees in isolation. However, it is most likely that candidates will set the discussion in context and that they will focus on guidelines only, although there are other ways of dealing with ethical issues.

One possible way in which this question could be answered, is to use studies of social influence (although this is not a requirement) and to consider the extent to which these studies followed the ethical guidelines, such as those given by the BPS or APA and to show how the psychologists dealt with the issues. For example, while Zimbardo gained informed consent from his participants (following an ethical guideline, AO1), he did not gain full informed consent since the 'prisoners' did not know they would be arrested (AO2 – commentary). Candidates could also consider that at times this failure to follow the guidelines produced findings that were more meaningful than if the guidelines had been adhered to strictly (AO2).

Candidates may introduce further material as a form of commentary/evaluation i.e. they have just selected material and described it, but it is not relevant to AO1 and not credited as such. The degree to which candidates use this material as part of a critical commentary, will constitute the *effectiveness* of the evaluation and hence the number of marks awarded for AO2. Candidates who offer no commentary may still be judged to have selected appropriate material and thus commentary can be described as 'just discernible'. This additional material can receive some AO2 credit because it has 'AO2 potential'.

**Marking allocation****AO1**

|                  |  |
|------------------|--|
| <b>6-5 marks</b> | Outline of how ethical issues have been dealt with is both <b>accurate</b> and <b>detailed</b> . For example, candidates may offer a detailed and accurate account of some ways of dealing with issues, e.g. debriefing, use of guidelines, presumptive consent. |
| <b>4-3 marks</b> | Outline of how ethical issues have been dealt with is <b>limited</b> . It is generally <b>accurate</b> and/or <b>less detailed</b> . For example, candidates might offer a less detailed account, or just describes the guidelines.                              |
| <b>2-1 marks</b> | Outline of how ethical issues have been dealt with is <b>basic, lacking detail</b> , and may be <b>muddled</b> and/or <b>flawed</b> .  |
| <b>0 marks</b>   | Outline of how ethical issues have been dealt with is <b>inappropriate</b> (for example, the candidate may offer an outline of material that is not related to an ethical issue) or the description is <b>incorrect</b> .  |

**AO2**

|                    |  |
|--------------------|--|
| <b>12-11 marks</b> | There is an <b>informed commentary</b> on the extent to which the ethical issues have been dealt with and <b>reasonably thorough analysis</b> of relevant psychological material, which has been used in an <b>effective</b> manner, within the time constraints of answering this part of the question. |
| <b>10-9 marks</b>  | There is a <b>reasonable commentary</b> on the extent to which the ethical issues have been dealt with and <b>slightly limited analysis</b> of relevant psychological material, which has been used in an <b>effective</b> manner.   |
| <b>8-7 marks</b>   | There is a <b>reasonable commentary</b> on the extent to which the ethical issues have been dealt with but <b>limited analysis</b> of relevant psychological material, which has been used in a <b>reasonably effective</b> manner.  |
| <b>6-5 marks</b>   | There is a <b>basic commentary</b> on the extent to which the ethical issues have been dealt with and <b>limited analysis</b> of relevant psychological material, which has been used in a <b>reasonably effective</b> manner.   |
| <b>4-3 marks</b>   | There is <b>superficial commentary</b> on the extent to which the ethical issues have been dealt with and <b>rudimentary analysis</b> of relevant psychological material. There is <b>minimal</b> interpretation of the material used..  |
| <b>2-1 marks</b>   | Commentary on the extent to which the ethical issues have been dealt with is <b>just discernible</b> (for example, through appropriate selection of material). Analysis is <b>weak</b> and <b>muddled</b> . The answer may be <b>mainly irrelevant</b> to the problem it addresses.                      |
| <b>0 marks</b>     | Commentary is absent or <b>wholly irrelevant</b> to the problem it addresses.  |

**SECTION B - RESEARCH METHODS****3****Total for this question: 30 marks**

Research has suggested that the content of television news programmes can influence a person's mood. If the news is mainly negative people feel depressed after watching it, while if the news is positive they do not.

A team of psychologists from a university tested this idea. They designed two similar news programmes; one contained positive events (e.g. a cure for cancer had been found; unemployment rates were low) and the other contained negative events (e.g. peace talks had failed; earthquake left many dead). Half of the participants watched the positive programme first and the negative programme three weeks later. The other half saw the programmes in the reverse order. A mood questionnaire was used to measure their mood on each occasion; scores ranged from 13-23. A high score on the questionnaire represented a more positive mood.

The findings are shown below.

**Table 1: A summary of the scores from mood questionnaires**

|                      | <b>Mean</b> | <b>Standard Deviation</b> |
|----------------------|-------------|---------------------------|
| <b>Positive News</b> | 19.00       | 2.38                      |
| <b>Negative News</b> | 15.92       | 1.26                      |

**Note:** For Question 3, only the first answer is accepted, positive marking **does not** apply.

(a) State the aim of this experiment.

(2 marks)

**AO3**

The aim of this experiment was to see whether the type of news programme watched (positive or negative content) affects mood; if watching negative news makes people depressed and if positive news does not.

**Marking allocation**

|                |   |
|----------------|---|
| <b>2 marks</b> | Statement of the aim is both <b>accurate</b> and <b>detailed</b> , for example mentioning both positive and negative content and their effect on mood.  |
| <b>1 mark</b>  | Statement of the aim is <b>basic, lacking detail</b> , and may be <b>muddled</b> and/or <b>flawed</b> . For example, the content of a TV programme affects mood, but without the detail of positive/negative content. |
| <b>0 marks</b> | Statement of the aim is <b>inappropriate</b> (for example, the candidate may offer a description of the procedure) or the statement is <b>incorrect</b> .   |

(b) Describe the operationalised independent variable and the operationalised dependent variable for this experiment. (2 marks + 2 marks)

**AO3**

To operationalise a variable it must be stated in such a way so that it can be measured. The independent variable is the content of the news programme, whether it is positive or negative. The dependent variable is the score on the mood questionnaire. For example, to fully operationalise the IV a candidate would need to state that it was a news programme that dealt with positive events or negative events. A more basic answer might merely offer that the IV was a news programme, without explaining that there were both positive and negative versions.

If a candidate has not made it clear which answer is the IV, assume the first one is the IV and the second is the DV.

**For each variable:**

|                |  |
|----------------|--|
| <b>2 marks</b> | Description of the variable is both <b>accurate</b> and <b>detailed</b> . For example as given in the marking criteria.  |
| <b>1 mark</b>  | Description of the variable is <b>basic, lacking detail</b> , and may be <b>muddled</b> and/or <b>flawed</b> . For example, the IV is the news programme and the DV is mood.                                       |
| <b>0 marks</b> | Description of the variable is <b>inappropriate</b> (for example, the candidate may offer a description of the findings) or the statement is <b>incorrect</b> . For example the IV and DV are the wrong way round. |

|   |                     |
|---|---------------------|
| (c) (i) Identify the type of experimental design that was used.           | (1 mark)            |
| (ii) Give <b>one</b> advantage and <b>one</b> disadvantage of this design | (2 marks + 2 marks) |

**(i) AO1**

The research design is a repeated measures design.

**(ii) AO2****Advantage of repeated measures design:**

No participant variables since all participants are tested under both conditions.

Since each person is used twice, fewer people are required.

**Disadvantage of repeated measures design:**

Participants are likely to guess the aim (mood is affected by content of programme) since they see both the positive and negative programme.

Losing participants between the two conditions. There is a three-week delay between the two conditions, some participants may not return.

There is no requirement to contextualise the answer, however context may be a way of providing further detail.

Take the first answer only.

**For the research design:**

|                |   |
|----------------|---|
| <b>1 mark</b>  | Appropriate design identified.                            |
| <b>0 marks</b> | No appropriate design identified, or design is incorrect. |

**For the advantage/disadvantage:**

|                |  |
|----------------|--|
| <b>2 marks</b> | Description of the advantage/disadvantage is both <b>accurate</b> and <b>detailed</b> . For example, as suggested in the marking criteria.   |
| <b>1 mark</b>  | Description of the variable is <b>basic, lacking detail</b> , and may be <b>muddled</b> and/or <b>flawed</b> . For example, by merely stating 'participant variables' without further detail.                |
| <b>0 marks</b> | Description of the advantage/disadvantage is <b>inappropriate</b> (for example, the candidate may offer a description of an advantage/disadvantage of another design) or the statement is <b>incorrect</b> . |

- (d) Explain why the experiment was designed in such a way that half the participants saw the positive programme first and the other half of the participants saw the negative programme first. (3 marks)

**AO3**

Since a repeated measures design was used, some form of counterbalancing was necessary to help reduce order effects. Half of the participants see the positive programme followed by the negative programme and the others seeing the programmes in the reverse order, the effect one programme might have on the other is counterbalanced.

In order to achieve full marks the answer must be contextualised, as indicated above.

Candidates can get full marks without using the term ‘counterbalance’.

**Marking allocation**

|                |   |
|----------------|---|
| <b>3 marks</b> | Explanation of is both <b>accurate</b> and <b>detailed</b> . For example, the candidate has given an accurate explanation of why counterbalancing is needed in this experiment.   |
| <b>2 marks</b> | Explanation is <b>limited</b> . It is <b>generally accurate</b> but <b>less detailed</b> . For example, the candidate may give a less detailed explanation of counterbalancing, or a more detailed explanation but not within the context of this experiment. |
| <b>1 mark</b>  | Explanation is <b>basic, lacking detail</b> , and may be <b>muddled</b> and/or <b>flawed</b> . For example, the candidate has given a basic explanation of counterbalancing but not within the context of this experiment.                                    |
| <b>0 marks</b> | Explanation is <b>inappropriate</b> (for example, the explanation is not connected with counterbalancing) or the explanation is <b>incorrect</b> .  |

|   |           |
|---|-----------|
| (e) (i) Give <b>one</b> advantage of using the mean.  | (2 marks) |
| (ii) What does standard deviation tell us about data? | (2 marks) |

**(i) AO1**

One advantage of the mean is that it is the only measure of central tendency that uses all the numerical values of each score in its calculations.

Candidates may contextualise their answers as a means of providing detail but this is not required.

**Marking allocation**

|                |  |
|----------------|--|
| <b>2 marks</b> | The advantage is both <b>accurate</b> and <b>detailed</b> .  |
| <b>1 mark</b>  | The advantage is <b>basic, lacking detail</b> , and may be <b>muddled</b> and/or <b>flawed</b> .   |
| <b>0 marks</b> | The advantage is <b>inappropriate</b> (for example, the candidate may state what the mean of each group is) or the explanation is <b>incorrect</b> . |

**(ii) AO2**

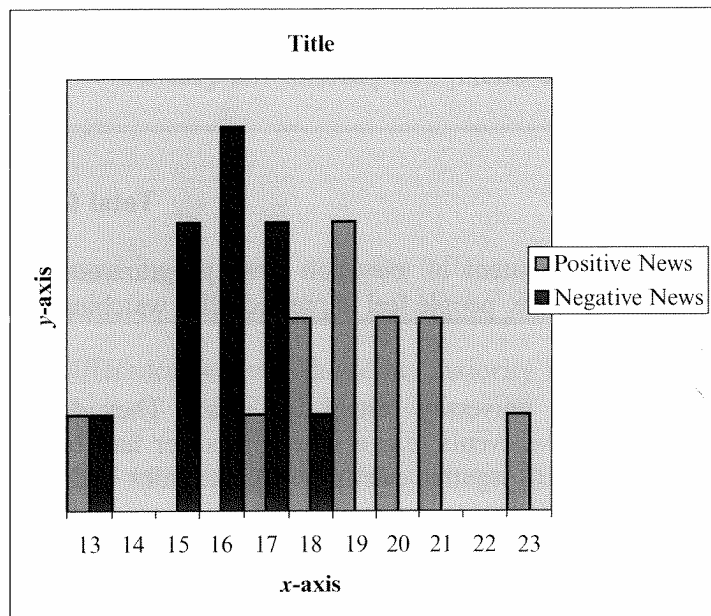
The standard deviation is a measure of how the scores are spread around the mean. It takes account of all the scores and is a robust and accurate measure of dispersion. The standard deviation indicates the variance and is an accurate measure of dispersion as it takes account of the distance between all the values.

Candidates may contextualise their answers as a means of providing detail but this is not required.

**Marking allocation**

|                |  |
|----------------|--|
| <b>2 marks</b> | The explanation is both <b>accurate</b> and <b>detailed</b> .  |
| <b>1 mark</b>  | The explanation is <b>basic, lacking detail</b> , and may be <b>muddled</b> and/or <b>flawed</b> .   |
| <b>0 marks</b> | The advantage is <b>inappropriate</b> (for example, the candidate may describe something other than the standard deviation) or the explanation is <b>incorrect</b> . |

The researchers summarised their data in the following histogram:



- |   |          |
|---|----------|
| (f) (i) Provide a suitable title for the histogram. | (1 mark) |
| (ii) Give an appropriate label for the x-axis.      | (1 mark) |
| (iii) Give an appropriate label for the y-axis.     | (1 mark) |

**AO3**

- (i) A suitable title might be: Histogram to show the distribution of scores from the mood questionnaires.
- (ii) Scores on the mood questionnaires.
- (iii) Frequency, or percentage, or number of participants, any one of these would be acceptable.

**For each label:**

|                |  |
|----------------|--|
| <b>1 mark</b>  | Appropriate label given, e.g. (i) Histogram to show scores on questionnaire. |
| <b>0 marks</b> | No appropriate label given or incorrect label given.                         |



(g) Give **one** conclusion that can be drawn from the data (as illustrated in the table and histogram).  
(3 marks)

**AO3**

Candidates must offer a conclusion, not describe a finding i.e. they must not re-state the data given as these are not conclusions. For example conclusions are:

- The type of news programme (positive or negative content) affects scores on a mood questionnaire, with the positive content generally resulting in higher mood scores than the negative content.
- They could conclude their mood can be influenced by what is seen on TV, a 'positive programme' can create a good mood.
- They found a greater range of mood scores from the positive programme, thus they could *conclude* that not all people are affected in the same way.

**Marking allocation**

|                |  |
|----------------|--|
| <b>3 marks</b> | The conclusion that can be drawn from the graph and/or table is both <b>accurate</b> and <b>detailed</b> . From looking at the standard deviations they could conclude that people tend to respond in a more similar way to negative programmes than to positive ones, as the standard deviation is smaller. |
| <b>2 marks</b> | The conclusion that can be drawn from the graph and/or table is <b>generally accurate</b> but <b>less detailed</b> . Positive mood scores had a greater range, suggesting not everyone is affected in the same way.  |
| <b>1 mark</b>  | The conclusion that can be drawn from the graph and/or table is <b>basic, lacking detail</b> , and may be <b>muddled</b> and/or <b>flawed</b> .  |
| <b>0 marks</b> | The conclusion that can be drawn from the graph and/or table is <b>inappropriate</b> (for example, the candidate may describe the findings) or the outline description is <b>incorrect</b> .   |

- (h) This study used the experimental method. Briefly describe how you would use a method other than an experimental method to investigate the same aims. (6 marks)

**AO3**

While there are several different methods that might be used, it is important that the aims remain the same (i.e. to see whether the type of news watched affects mood). Since the method used here is the experimental method, using a different experimental *design* would not receive credit. If the candidate simply suggests measuring mood in a different way (e.g. by interview and not questionnaire) this could receive some credit, as it makes a minor amendment to the design.

Candidates could use interviews, observations or any other non-experimental method. They need to describe how they might implement their chosen method.

Candidates might include:

Procedures – e.g. sampling techniques; apparatus;

Ethical issues;

Method of analysing findings.

**Marking allocation**

|                  |  |
|------------------|--|
| <b>6-5 marks</b> | Description of the different method is both <b>accurate</b> and <b>detailed</b> . For example, the candidate has provided an accurate and detailed account of their method, possibly including explicit details about the procedures involved.                                   |
| <b>4-3 marks</b> | Description of the different method is <b>limited</b> . It is <b>generally accurate</b> but <b>less detailed</b> . For example, the method is clearly identified but the description of the procedures lacks detail, only partially focusing on the specific aims of this study. |
| <b>2-1 marks</b> | Description of the different method is <b>basic, lacking detail</b> , and may be <b>muddled</b> and/or <b>flawed</b> . For example, the method is identified and the procedures are minimal.   |
| <b>0 marks</b>   | The description is <b>inappropriate</b> (for example not related to the original aims) or the description is <b>incorrect</b> .  |

**ASSESSMENT GRID**

| <b>Question</b>             | <b>AO1</b> | <b>AO2</b> | <b>AO3</b> | <b>Total</b> |
|-----------------------------|------------|------------|------------|--------------|
| 1 (a)                       | 6          |            |            | 6            |
| (b)                         | 6          |            |            | 6            |
| (c)                         | 6          | 12         |            | 18           |
| <b>Total for Question 1</b> | <b>18</b>  | <b>12</b>  |            | <b>30</b>    |
| 2 (a)                       | 6          |            |            | 6            |
| (b)                         | 6          |            |            | 6            |
| (c)                         | 6          | 12         |            | 18           |
| <b>Total for Question 2</b> | <b>18</b>  | <b>12</b>  |            | <b>30</b>    |
| 3 (a)                       |            |            | 2          | 2            |
| (b)                         |            |            | 4          | 4            |
| (c)                         | 1          | 4          |            | 5            |
| (d)                         |            |            | 3          | 3            |
| (e)                         | 2          | 2          |            | 4            |
| (f)                         |            |            | 3          | 3            |
| (g)                         |            |            | 3          | 3            |
| (h)                         |            |            | 6          | 6            |
| <b>Total for Question 3</b> | <b>3</b>   | <b>6</b>   | <b>21</b>  | <b>30</b>    |
| QoWC                        | 2          |            |            | 2            |
| <b>Total</b>                | <b>39</b>  | <b>30</b>  | <b>21</b>  | <b>92</b>    |
| <b>Total for Unit</b>       |            |            |            | <b>62</b>    |