

**Psychology**

Advanced Subsidiary GCE

Unit **G541**: Psychological Investigations

**Mark Scheme for June 2011**

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## Section A

A researcher conducted a study using the participant observation method, to investigate the behaviour of people waiting in a bus queue. The observation took place on a week day between 8am and 10am using event sampling.

The table below shows the number of times different behaviours were observed.

Reading (magazine, newspaper, book etc)	Talking to other people	Listening to music through headphones	Using a mobile phone	Waiting quietly doing nothing
31	11	18	26	8

1(a) What is participant observation? [2]		
<i>Participant observation is where the researcher(s) are in some way part of the activity / group of people whose behaviour is being observed</i>		
Marks	Answer	Additional Guidance
0 marks	The candidate has not provided any creditworthy information	-Context is not necessary for full marks here, but is okay if included  -Reference simply to a standard observation without acknowledgement of involvement with the group / activity being studied should be awarded zero
1 mark	Attempt to explain what participant observation is but lacks clarity	
2 marks	Clear explanation of what participant observation is	

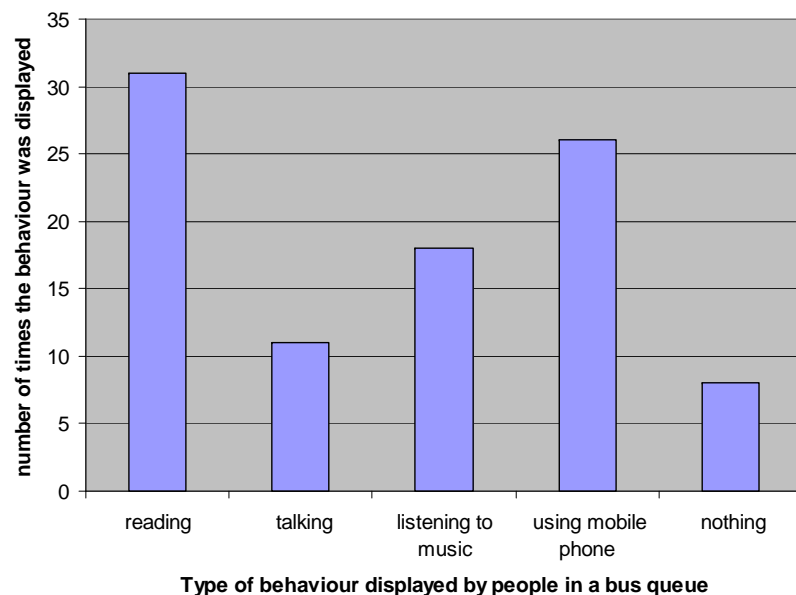
1(b) Identify one strength and one weakness of using the participant observation method in this study. [4]		
<p><i>Strengths include: ability to monitor and record behaviour in closer detail; increased accuracy of data observation; less likely to miss things and less likely to be noticed as a researcher (so could lower demand characteristics and improve overall validity); can provide unique insights that may not otherwise be gained.</i></p> <p><i>Weaknesses include: participant reactivity if people become aware they are being monitored (increasing demand characteristics); more difficult to record and monitor behaviour unobtrusively if part of the group being observed; becoming a member of the group being observed may make the researcher less objective and may increase observer bias; could be dangerous; also accept ethical issues here</i></p>		
Marks	Answer	Additional Guidance
<b>2 marks for strength, 2 marks for weakness</b>		
<b>0 marks</b>	The candidate has not provided any creditworthy information	
<b>1 mark</b>	Strength/weakness clearly identified but not in the context of the research outlined in the source material	<b>OR</b> attempt to identify strength / weakness in context, but lacks clarity
<b>2 marks</b>	Strength/weakness clearly identified in the context of the research outlined in the source material	
		<p>-For full marks the suggested strength / weakness must be specific to the use of participant observation.</p> <p>-Context here refers to <i>bus queue</i>, or <i>waiting for a bus</i> or <i>any of the observed activities (e.g. reading)</i></p> <p>-Comments relating to the observation method in general (rather than specifically <i>participant</i> observation) in context or not should be awarded max 1 mark for strength and 1 for weaknesses.</p>

2(a) What is event sampling? [2]		
<i>Event sampling is when the observer(s) record specific occurrences of behaviour each and every time they occur continuously throughout the whole duration of the study.</i>		
Marks	Answer	Additional Guidance
0 marks	The candidate has not provided any creditworthy information	-Context not required here (but Okay if included)
1 mark	Attempt to explain what event sampling is	
2 marks	Clear explanation of what event sampling is	

2(b) Identify one strength and one weakness of using event sampling in this study. [4]		
<i>Strengths include: less likely to miss things as behaviour is monitored / recorded continuously and all occurrences of the behaviours being studied are noted, thereby potentially increasing the overall validity of the research, as well as the reliability of it's findings; also reference to the strengths of obtaining quantitative data</i>		
<i>Weaknesses include: might get difficult to record all specified behaviours at times and may miss some behaviours whilst recording others.</i>		
Marks	Answer	Additional Guidance
<b>2 marks for strength, 2 marks for weakness</b>		
0 marks	The candidate has not provided any creditworthy information	-Context here refers to <i>bus queue</i> , or <i>waiting for a bus</i> or <i>any of the observed activities (e.g. reading)</i>  -Accept strengths / weaknesses related to structured observation (e.g. weakness = the pre-determined categories used may not cover all behaviours witnessed)
1 mark	General description of strength/weakness but not in the context of the research outlined in the source material <b>OR</b> attempt to describe strength/weakness (but lacks some clarity) that is in the context of the research outlined in the source material	
2 marks	Clear description of strength/weakness that is in the context of the research outlined in the source material	

**3(a) Sketch an appropriate graph or chart to display the findings from this study. [4]**

A bar chart looking something like this should be produced



Marks	Answer	Additional Guidance
0 marks	The candidate has not provided any creditworthy information	-For full marks it must be clear (from either an overall title for the graph / chart, or the title provided for the axis displaying the observed behaviours) that the behaviours occurred <i>in a bus queue</i> .  -Take care that the y axis refers to number of times the observed events have occurred, and not the number of <i>people</i> exhibiting such behaviours
1 mark	Appropriate graph, but no labelling	
2 marks	Appropriate graph but incomplete, inaccurate in more than one way or unclear labelling in more than one way	
3 marks	Appropriate graph, but a slight lack of clarity (e.g. labelling on one axis is inaccurate or unclear but OK on the other)	
4 marks	Appropriate graph with clear labelling on both axes	

Table of data for reference when marking the sketch the candidate has produced

Reading (magazine, newspaper, book etc)	Talking to other people	Listening to music through headphones	Using a mobile phone	Waiting quietly doing nothing
31	11	18	26	8

**3(b) Outline two findings from the data displayed in this graph. [4]**

*Findings could include: most popular behaviour whilst waiting in a bus queue was reading; the least common behaviour was doing nothing (this was the category with the fewest observations); using mobile phones was the second most popular activity engaged in whilst waiting in a bus queue.*

*Note: the data collected is the total number of occurrences of the different categories of observed behaviour, and not the total number of people engaging in such behaviours (e.g. one person could have used their mobile phone on a number of different occasions).*

Marks	Answer	Additional Guidance
<b>2 marks for each finding</b>		
<b>0 marks</b>	The candidate has not provided any creditworthy information	-Context here refers to <i>bus queue</i> , or <i>waiting for a bus</i> or <i>any of the observed activities</i> (e.g. <i>reading</i> )  - <i>Descriptive statistics such as mean, median and range are inappropriate for this data and should not receive credit. However, the mode is appropriate and is acceptable.</i>  - <i>Reference to people, rather than number of behaviours recorded is capped at one mark.</i>
<b>1 mark</b>	The candidate has identified a finding, but this lacks clarity, or is not in the context of the research outlined in the source material.	
<b>2 marks</b>	The candidate has clearly identified a finding and this is in the context of the research outlined in the source material.	

Table of data for reference when marking the findings presented by the candidates

Reading (magazine, newspaper, book etc)	Talking to other people	Listening to music through headphones	Using a mobile phone	Waiting quietly doing nothing
31	11	18	26	8

## Section B

A study investigating factors influencing inter-personal attraction was conducted by psychologists using the self-report method. This involved asking people questions about how important age, appearance, personality, occupation and money were when forming romantic relationships. People were approached in a local shopping mall one weekday morning and asked if they would take a questionnaire home to complete and return using a pre-paid envelope.

4(a) Identify two ethical issues in this study. [4]		
<i>Ethical issues could include: possible embarrassment about being approached and asked to participate in a study relating to interpersonal attraction; possible harm (upset) by being reminded about previous relationships; invasion of personal privacy gathering information about private matters etc. Note: ethical issues can be positive as well as negative.</i>		
Marks	Answer	Additional Guidance
<b>2 marks for each ethical issue identified</b>		
<b>0 marks</b>	The candidate has not provided any creditworthy information	
<b>1 mark</b>	Appropriate ethical issue clearly identified, but not in the context of the research outlined in the source material	-Context here refers to <i>interpersonal attraction</i> or <i>romantic relationships</i> or just <i>relationships</i> or reference to <i>partners</i> or reference to <i>age, appearance, personality, occupation and money</i> etc
	<b>OR</b> attempt to identify appropriate ethical issue, but lacks clarity, that is in context	
<b>2 marks</b>	Appropriate ethical issue clearly identified in the context of the research outlined in the source material	
	-It is acceptable to have two examples of the same category of ethical issue (e.g. two ways it could cause harm)	
4(b) Suggest how one of these ethical issues could be addressed. [3]		
<i>For example, participants could be forewarned about the nature of the study and that some sensitive questions would be required to be answered that may cause embarrassment. Also, ensuring no insensitive questions are asked, or allowing participants to decide if the data collected from them is used etc.</i>		
Marks	Answer	Additional Guidance
<b>0 marks</b>	The candidate has not provided any creditworthy information	
<b>1 mark</b>	Attempt to suggest how one ethical could be dealt with, but unclear	
<b>2 marks</b>	Clear suggestion but not in the context of the research outlined in the source material	-Context here refers to <i>interpersonal attraction</i> or <i>romantic relationships</i> or just <i>relationships</i> or reference to <i>partners</i> or reference to <i>age, appearance, personality, occupation and money</i> etc
	<b>OR</b> brief or unclear suggestion, but in context	
<b>3 marks</b>	Clear suggestion in the context of the research outlined in the source material	



5 Evaluate the reliability and validity of this research. [10]				
Evaluating the reliability could include: differing responses dependent on whether participants were currently in a happy relationship or not; the time of day the questionnaire was completed; whether the participants were alone or with other people (especially their partner); personal characteristics of the researcher (their sex, age appearance etc) etc				
Evaluating the validity could include: the reluctance to disclose full, honest details because of embarrassment; the age of the participants (older people may be less comfortable to disclose matters relating to inter-personal attraction as readily as young people); inaccurate details recorded due to demand characteristics about the things the participants expect the researchers to find				
Note – it is okay to discuss the same point related to both reliability and validity if it is made clear how it would be influential (e.g. different findings may be obtained if the questionnaire was completed whilst a partner was present, which would affect the reliability of the findings, and people may be less likely to disclose certain things with their partner present, which would affect the validity of the research).				
Marks	Answer	Additional Guidance		
0 marks	The candidate has not provided any creditworthy information	-Context here refers to <i>interpersonal attraction</i> or <i>romantic relationships</i> or just <i>relationships</i> or reference to <i>partners</i> or reference to <i>age, appearance, personality, occupation and money</i> etc. reference to the <i>shopping centre</i> on its own is not sufficient for context.  -Accept appropriate suggested improvements as acceptable comments about reliability and validity		
1-2 marks	General attempt to evaluate reliability only		OR General attempt to evaluate validity	
3-4 marks	General attempt to evaluate both reliability and validity		OR attempt to evaluate reliability <b>or</b> validity in context	
5-6 marks	Clear evaluation of reliability, <b>or</b> validity in context		OR clear evaluation of both reliability and validity, but not in context (if only one clear = 5 marks)	OR attempt to evaluate both reliability and validity in context (if only one in context = 5 marks)
7-8 marks	Clear evaluation of reliability in context and attempt at evaluation of validity (just 7 marks if attempt not in context)		OR Clear evaluation of validity in context and attempt at evaluation of reliability (just 7 marks if attempt not in context)	
9-10 marks	Clear evaluation of <b>both</b> reliability and validity in context.  Note: For 10 marks all evaluation points discussed must be correctly labelled with no confusion between the two.			

6 Name and describe and alternative sampling method for this study. [3]				
Accept any other sampling method as an alternative, besides opportunity sampling, as already used (e.g. could suggest self-selecting sampling).				
Marks	Answer		Additional Guidance	
0 marks	The candidate has not provided any creditworthy information		-Context here refers to <i>interpersonal attraction</i> or <i>romantic relationships</i> or just <i>relationships</i> or reference to <i>partners</i> or reference to <i>age, appearance, personality, occupation and money</i> etc	
1 mark	Alternative sampling method only named	<b>OR</b> attempt to describe alternative sampling method that is not named, or named incorrectly		
2 marks	Alternative sampling method clearly described, but not named	<b>OR</b> alternative sampling method named and clearly described, but not in context		<b>OR</b> Attempt to name and describe alternative sampling method in context, but lacks clarity, or named incorrectly
3 marks	Alternative sampling method named and clearly described in context			

## Section C

Psychologists want to investigate if there is a correlation between how interested a person is in cars and their driving skills.

7 Suggest an appropriate null hypothesis for this study. [4]		
For example ... <i>There will be no correlation between how interested a person is in cars and their driving skills.</i>		
Marks	Answer	Additional Guidance
0 marks	The candidate has not provided any creditworthy information	-Context here refers to <i>interest in cars, cars and driving skills</i>
1 mark	The candidate has written an appropriate null hypothesis but has simply stated 'there will not be/is no correlation'. There is no indication of either of the measured variables	-Stating 'no difference' or 'no effect' should be awarded zero, regardless of what else is written
2 marks	The candidate has written an appropriate null hypothesis but has only referred to one variable	-Alternate hypotheses should be awarded zero
3 marks	The candidate has written an null hypothesis referring to both variables, but there is a lack of clarity about one of the measured variables or both	-Null hypotheses stating <i>links or associations</i> are not creditworthy
4 marks	The candidate has written a clearly stated appropriate null hypothesis referring to both of the measured variables	-Directional null hypotheses (e.g. stating <i>there will be no positive correlation ...</i> ) are not creditworthy

8 Describe and evaluate a way to measure 'driving skills' that could be used in this study. [10]		
<p><i>Ability to drive a car could be measured by using a computer based car driving simulator in which participants have to react to a number of different hazards (e.g. icy road conditions, vehicles pulling out in front etc) and receive a score out of 10 etc.</i></p> <p><i>Evaluation points (of this suggested way to measure driving ability) could include low ecological validity as people may react differently in a real car on real roads. However, reliability would be high as it enables standardized hazards to be used in the same way for each participant. Also, a quantifiable measure of driving ability is generated that enables easy comparisons across different people etc.</i></p>		
Marks	Answer	Additional Guidance
0 marks	The candidate has not provided any creditworthy information	-Context here refers to <i>cars</i> and <i>driving skills / ability etc</i>
1-2 marks	Minimal information – attempt to describe a way to measure driving skill only – replication not possible	-Details of sample and sampling method are not required, just details of how the variable <i>driving skills</i> could be measured
3-4 marks	Detailed description of a way to measure driving skill that would allow full replication, but no evaluation. If only minor omissions 3 marks	-Where candidates suggest the use of rating scales labelling of each end of the scale is not necessary
5-6 marks	Detailed description of a way to measure driving skill that would allow full replication, and attempt at evaluation	-Minor omissions are lack of detail of the test and the type of data that would be gathered
7-8 marks	Detailed description of a way to measure driving skill that would allow full replication and clear, detailed evaluation but not in context	-Note: description of the way to measure driving skill can be basic and simple, but still be replicable (e.g. simply suggesting asking people to rate their driving ability on a scale of 1 to 10)
9-10 marks	For 9 marks – detailed description of a way to measure driving skill that would allow replication and clear, detailed evaluation with reference to at least one evaluation issue in context  For 10 marks - Detailed description of a way to measure driving skill that would allow replication and clear, detailed evaluation with reference to two or more appropriate evaluation issues in context	

9 Identify one strength and one weakness of using the correlation method in this study. [6]		
<p><b>Strengths</b> could include: provides information about patterns/trends between driving skills and interest in cars that can then be investigated more experimentally if desired; can be plotted visually in a scattergraph to see relationship between driving skills and interest in cars clearly; enables us to make predictions about the relationship between driving skills and interest in cars etc</p> <p><b>Weaknesses</b> could include: does not inform us about cause-and-effect (being interested in cars does not necessarily make people better drivers); the relationship revealed can be misleading; difficulties quantifying the variables 'driving skills' and 'interest in cars' etc</p>		
Marks	Answer	Additional Guidance
<b>3 marks for strength, 3 marks for weakness</b>		
<b>0 marks</b>	The candidate has not provided any creditworthy information	-Context here refers to <i>interest in cars, cars</i> and <i>driving skills</i>
<b>1 mark</b>	Attempt to identify strength/weakness but lacks clarity and not in the context of the research outlined in the source material	
<b>2 marks</b>	Strength/weakness clearly identified but not in the context of the research outlined in the source material <b>OR</b> attempt to identify strength/weakness but lacks clarity but in the context of the research outlined in the source material	
<b>3 marks</b>	Strength/weakness clearly identified and in the context of the research outlined in the source material	

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