



GSOC.RM8 Experiments in Sociological Research: Laboratory and Field Experiments

AQA 8192 · Calculators not allowed · about 60 minutes

Total Marks

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Name: _____ Date: ____ / ____ / ____

Answer ALL questions. For short answer questions write in full sentences for AO2 and AO3 items. The final evaluation question must be written in full sentences. Spend about 60 minutes on the paper.

- 1** Which one of the following is an independent variable in a sociological experiment testing whether classroom seating location affects student participation?

- ☐ A) the number of times students volunteer answers
- ☐ B) the seating location assigned to students
- ☐ C) the age of the students
- ☐ D) the school inspector's report

(Total for Question 1 is 1 mark)

- 2** Define the term 'control group' as it is used in a sociological laboratory experiment.

(Total for Question 2 is 2 marks)

- 3** Define what sociologists mean by 'replication' in relation to using experiments in research.

(Total for Question 3 is 2 marks)

- 4** Explain two ways a laboratory experiment gives sociologists high control over variables in a study of group behaviour in a classroom setting.

(Total for Question 4 is 4 marks)

5 Describe one weakness of laboratory experiments in sociology related to validity.

(Total for Question 5 is 3 marks)

6 Explain two practical reasons why sociologists rarely use laboratory experiments to study whole societies or very large groups.

(Total for Question 6 is 4 marks)

7 State one way the Hawthorne effect can influence the results of a field experiment in a workplace setting.

(Total for Question 7 is 2 marks)

8 Explain one ethical issue specific to using field experiments in public spaces, such as testing whether posters reduce littering in a city centre.

(Total for Question 8 is 4 marks)

- 9** Item A: A researcher tests two posters in similar parks to see if anti-litter messages reduce dropping of fast food wrappers. In Park X the researcher displays a poster saying 'Please keep this park clean' and records 8 incidents of littering in one afternoon. In Park Y there is no poster and there are 14 incidents of littering in one afternoon. Using Item A and your knowledge, explain one strength of this field experiment design.

(Total for Question 9 is 4 marks)

- 10** Using Item A again, explain one weakness of this field experiment that might make the results unreliable.

(Total for Question 10 is 4 marks)

- 11** Describe the comparative method as used by sociologists when a true experiment is not possible, for example when studying differences between two whole countries.

(Total for Question 11 is 3 marks)

- 12** Explain one advantage of using the comparative method rather than trying to carry out an experiment on whole societies.

(Total for Question 12 is 2 marks)

- 13** State one limitation of the comparative method in establishing cause and effect when comparing two societies.

(Total for Question 13 is 2 marks)

- 14** Explain two ways demand characteristics may affect participants in a laboratory experiment about conformity among school pupils.

(Total for Question 14 is 4 marks)

- 15** Give one example of how a sociologist could increase the reliability of observations in a field experiment testing public reactions to a new social policy poster.

(Total for Question 15 is 3 marks)

16 Discuss how useful experiments are for sociological research into human behaviour, for example comparing laboratory and field experiments and mentioning the comparative method as an alternative.

Write a balanced evaluation considering strengths and weaknesses of experiments for sociology, comparing laboratory and field approaches and considering the comparative method where experiments are not possible.

(Total for Question 16 is 12 marks)

Mark scheme · GSOC.RM8 Experiments in Sociological Research: Laboratory and Field Experiments

Question 1

- **B1** B (the seating location assigned to students) because the independent variable is what the researcher manipulates
- **Answer: B**

Question 2

- **B1** identifies a control group as the group not exposed to the experimental treatment or manipulation (oe)
- **B1** development, e.g. it provides a baseline for comparison to see the effect of the independent variable
- **Answer: A control group is the group not exposed to the experimental treatment, providing a baseline for comparison so the effect of the independent variable can be seen.**

Question 3

- **B1** identifies replication as repeating a study or experiment to check results
- **B1** development, e.g. replication helps test whether findings are reliable and not due to chance or error
- **Answer: Replication is repeating a study or experiment to check results, which helps test whether findings are reliable and not due to chance or error.**

Question 4

- **B1** identifies controlling the independent variable, e.g. researcher assigns seating or tasks
- **B1** development, e.g. this ensures differences in the dependent variable can be linked to the manipulation
- **B1** identifies controlling extraneous variables, e.g. keeping the same room, time and instructions for all participants
- **B1** development, e.g. reducing extraneous variation increases internal validity of the causal claim
- **Answer: A laboratory experiment allows the researcher to control the independent variable, for example by assigning seating or tasks, so differences in participation can be linked to the manipulation; it also allows controlling extraneous variables, such as room, time and instructions, reducing other sources of variation.**

Question 5

- **B1** identifies a weakness, e.g. low ecological validity because the lab is artificial
- **B1** development, e.g. behaviour in a lab may not reflect real social behaviour in natural settings
- **B1** further development or example, e.g. students may act differently under observation than they would in a real classroom
- **Answer: A weakness is low ecological validity because the laboratory is artificial; behaviour in a lab may not reflect real social behaviour in natural settings, for example students may act differently when they know they are part of an experiment.**

Question 6

- **B1** identifies a practical reason, e.g. it is difficult or impossible to bring large numbers of participants into a controlled lab setting
- **B1** development, e.g. cost and time make large scale lab experiments impractical for whole societies
- **B1** identifies a second practical reason, e.g. ethical and logistical problems of manipulating social conditions for many people
- **B1** development, e.g. manipulating variables affecting whole communities could cause harm or require consent that is not feasible
- **Answer: Laboratory experiments are rarely used for whole societies because it is difficult to bring large numbers into a controlled lab, and cost and time make this impractical; there are also ethical and logistical problems in manipulating social conditions for many people, which could cause harm or require widespread consent.**

Question 7

- **B1** identifies that participants may change their behaviour because they know they are being observed
- **B1** brief development, e.g. this can make it hard to tell whether the change is due to the experimental variable or just being observed
- **Answer: Participants may change their behaviour because they know they are being observed, making it hard to tell whether changes are due to the experimental variable or simply the observation**

Question 8

- **B1** identifies an ethical issue, e.g. lack of informed consent from people observed in public
- **B1** development, e.g. members of the public may be unaware they are part of research and could be upset if identified
- **B1** identifies a second related issue, e.g. risk of causing harm or distress if the manipulation affects vulnerable groups
- **B1** development, e.g. giving misleading information or altering public services might have unintended negative consequences
- **Answer: An ethical issue is lack of informed consent because people in public may be unaware they are part of research; this can upset or distress participants if they are identified. A related issue is the risk of causing harm if the manipulation affects vulnerable groups or alters services, producing unintended negative consequences.**

Question 9

- **B1** identifies a strength, e.g. higher ecological validity because the test is in a real park setting
- **B1** development, e.g. behaviour is observed in a natural context so findings are likely to reflect real-world littering
- **B1** further development, e.g. the difference 8 versus 14 incidents suggests the poster may have had an effect, giving useful practical evidence
- **B1** link to sociological use, e.g. such applied results can inform local council policy on anti-litter campaigns
- **Answer: A strength is higher ecological validity because the research is carried out in real parks, so observed behaviour is likely to reflect actual littering. The difference of 8 incidents with a poster versus 14 without suggests the poster may have reduced littering, giving practical evidence that could inform council policy.**

Question 10

- **B1** identifies a weakness, e.g. lack of control of extraneous variables such as weather or park events
- **B1** development, e.g. a festival in Park Y could explain higher littering rather than the absence of a poster
- **B1** identifies a second weakness, e.g. observer effects or inconsistent recording methods between parks
- **B1** development, e.g. different observers might count incidents differently, reducing reliability of the comparison
- **Answer: A weakness is lack of control over extraneous variables, for example a festival or different visitor numbers in Park Y could explain higher littering rather than the poster. Another weakness is observer effects or inconsistent recording between parks, where different observers might count incidents differently, reducing reliability.**

Question 11

- **B1** identifies the comparative method as comparing existing societies or groups to look for patterns or possible causes
- **B1** development, e.g. sociologists compare variables between cases where they cannot manipulate variables experimentally
- **B1** example or further development, e.g. comparing crime rates and social policies between Country A and Country B to suggest explanations
- **Answer: The comparative method compares existing societies or groups to look for patterns or possible causes when experiments are impossible. Sociologists compare variables between cases, for example comparing crime rates and social policies between two countries to suggest explanations.**

Question 12

- **B1** identifies an advantage, e.g. it avoids ethical and practical problems of manipulating national policies or social conditions
- **B1** development, e.g. researchers can still learn about possible causes by comparing existing differences without intervention
- **Answer: An advantage is it avoids the ethical and practical problems of manipulating national policies or social conditions, while still allowing researchers to learn about possible causes by comparing existing differences.**

Question 13

- **B1** identifies a limitation, e.g. difficulty controlling for all other differences between societies
- **B1** brief development, e.g. many variables differ between countries so it is hard to be certain which one causes the observed outcome
- **Answer: A limitation is the difficulty of controlling for all other differences between societies, because many variables differ between countries making it hard to be certain which one causes the outcome.**

Question 14

- **B1** identifies that participants may guess the research aim and change behaviour to fit expectations
- **B1** development, e.g. pupils might pretend to conform more or less to please the researcher
- **B1** identifies that participants may try to behave in a socially desirable way
- **B1** development, e.g. pupils could avoid appearing to copy others if they think copying is frowned upon, distorting the results
- **Answer: Demand characteristics can lead participants to guess the aim and change behaviour to fit expectations, for example pupils might pretend to conform more or less to please the researcher. They can also cause socially desirable responding, for example pupils avoiding copying others if they think copying is frowned upon, distorting results.**

Question 15

- **B1** identifies an appropriate example, e.g. use the same clear coding scheme for all observers
- **B1** development, e.g. this reduces variation between observers
- **B1** further development or alternative, e.g. train observers and use inter-observer checks to ensure consistent recording
- **Answer: A sociologist could increase reliability by using the same clear coding scheme for all observers, reducing variation, and by training observers and carrying out inter-observer checks to ensure consistent recording.**

Question 16

- **Level 1** (1-3): Basic statements about experiments with limited development. May identify one or two simple strengths or weaknesses with little or no sociological context or examples.
- **Level 2** (4-6): Clear explanation of strengths and weaknesses of experiments. Some comparison between laboratory and field experiments and at least one valid point about the comparative method. Limited evaluation and few supporting examples.
- **Level 3** (7-9): Good evaluation showing understanding of how experiments provide control, replication and causal evidence but face validity, ethical and practical limits. Compares lab and field studies with relevant examples and shows why the comparative method can be a necessary alternative.
- **Level 4** (10-12): Detailed, balanced and well-supported argument. Explains how laboratory experiments give control and precision, and how field experiments improve ecological validity, but also evaluates problems such as demand characteristics, Hawthorne effect, ethics and limits for studying whole societies. Uses specific examples and reaches a supported conclusion about when experiments are useful and when comparative or other methods are preferable.
- **Indicative content:**
 - Laboratory experiments offer high control of variables, isolation of the independent variable and easier replication, supporting claims about cause and effect
 - Laboratory settings risk low ecological validity and demand characteristics, participants may act unnaturally when aware of being studied
 - Field experiments have higher ecological validity because they occur in natural settings, but they have weaker control and may suffer from Hawthorne effect and confounding variables
 - Ethical issues: informed consent, deception and potential harm are harder to manage in field experiments affecting the public
 - Practical limits: experiments are costly and usually unsuitable for studying whole societies or long term social changes
 - Comparative method allows sociologists to study societies without manipulation, avoiding ethical and practical problems but making causal claims weaker due to uncontrolled variables
 - Reliability and validity trade offs: how replication can improve reliability but may not solve validity problems if the setting is artificial
 - Usefulness depends on research aim: experiments are useful for testing specific causal hypotheses in controlled conditions or applied policy tests, while comparative and other methods are better for large scale, historical or cultural questions
 - Conclusion could weigh that experiments are a powerful tool when used appropriately, often alongside other methods, but they are not a universal solution for sociological research questions