

Boosting your Research Methods Grade

In Units 2 and 4, you will answer research-methods questions based on unfamiliar psychological studies. These questions may appear straightforward, but students often lose marks by overlooking part of the task, giving vague explanations or failing to apply their knowledge to the scenario. This guide explores some of the most common mistakes and shows you how to avoid them.



Issue #1: Not answering every part of the question

Read each question carefully and identify exactly what you are being asked to do. There may be multiple aspects to a question. Let's look at an example of a 4 mark question:

A psychologist investigated whether background music affects concentration. Twenty students completed a proofreading task while listening to instrumental music, and another twenty completed the same task in silence. The psychologist recorded the number of spelling errors correctly identified by each participant.

Describe one issue of validity in this study and explain how the psychologist could address it. [4]

To produce a complete answer, you should:

Identify a relevant validity issue



Link the issue to the study

Explain how the issue should be addressed



Apply the improvement to the study

Answer A

One validity issue is that the participants may have differed in their existing proofreading ability. Some students may naturally have been better at identifying spelling errors than others.

Answer B

One validity issue is participant variables. The psychologist could address this by using a repeated-measures design.

How many marks should each answer receive? What is missing from each one? Check the answers on the final page. Now try to write a 4 mark response below

Issue #2: Giving a generic answer when application is required

Always check whether the question refers to “this study,” “this research” or “the investigation above.” When it does, you must apply your answer to the specific scenario rather than simply describing the research method in general. Useful links might include:

Conditions /Groups (IV)

Participants



Behaviour being measured (DV)

Setting or procedure



A psychologist investigated whether adults who regularly work night shifts experience poorer sleep than adults who work during the day. Sixty participants completed an online sleep-quality questionnaire: 30 night-shift workers and 30 day workers.

Explain how the psychologist could have recruited participants using snowball sampling. [4]

A strong, well applied answer should:

- demonstrate accurate knowledge
- explain how the sampling technique would work in practice
- refer directly to the scenario
- Explain how the final sample would be obtained

Answer A

The psychologist could find one suitable participant and ask them to recommend other people who might also be willing to take part. This process could continue until enough participants had been recruited.

Answer B

The psychologist could first recruit one night-shift worker and one day worker. Each participant could then be asked to recommend other people with the same working pattern who might be willing to complete the sleep questionnaire.

How many marks should each answer receive? What is missing from each one? Check the answers on the final page. Now try to write a 4 mark response below:

Marks	Guidance
3-4	The response gives a clear and accurate explanation of snowball sampling and applies it appropriately to the night-shift and day-worker groups.
1-2	The response shows some understanding of snowball sampling, but the explanation may be brief, unclear or only loosely linked to the study.
0	No relevant or creditworthy response.

Issue#3: Identifying a strength or weakness without explaining its impact

When a question asks for a strength, weakness or impact, do not stop after identifying the issue. You must explain why it matters and show how it affects the quality of the research—usually its validity or reliability. Lets look at the sample question below:

A psychologist investigated whether studying with handwritten notes leads to better recall than studying from notes typed on a laptop. Forty students were randomly allocated to one of two groups. One group studied a passage using handwritten notes, while the other used a laptop. All participants then completed the same memory test.

Explain one strength and one weakness of using an independent-groups design in this study. [4]

For a full marks response, you must identify a strength, explain why it is a strength (how does it improve the research?), and remember to link to the context. You need to do the same again for the weakness.

Answer A

One strength is that there are no order effects because each student completes only one condition. One weakness is that participant variables may differ between the handwriting and laptop groups.

This answer identifies a relevant strength and weakness and links them to the study. However, it does not fully explain why each point matters.

Answer B

One strength of using an independent-groups design is that each student completes only one condition, so there are no order effects. This improves internal validity because memory-test performance cannot be affected by practice or fatigue from completing both tasks.

One weakness is that the handwriting and laptop groups may differ in characteristics such as natural memory ability or motivation. These participant variables could influence recall scores, making it less clear whether any difference was caused by the note-taking method and therefore reducing internal validity.

be specific about the type of validity/reliability to ensure full marks

Answer B would receive full marks as they fully explain the impact the strength / weakness would have on the research. Try the 2 mark question below (no link to context needed)

Explain one weakness of using a repeated measures experimental design [4]

Issue #4: Confusing validity and reliability

- Validity and reliability are related, but they are not the same. Make sure you identify the correct issue and explain precisely how it affects the research.

Validity concerns whether the study measures what it claims to measure and whether its conclusions are accurate.

- Internal validity:** Could another variable have affected the results?
- External validity:** Can the findings be generalised to other people, settings or situations?

Reliability concerns whether the research is consistent and could produce similar results if repeated.

- Internal reliability:** Are measurements applied consistently throughout the study?
- External reliability:** Are the procedures sufficiently standardised for another researcher to replicate?

Dealing with validity and reliability issues

Validity can often be improved by **controlling extraneous variables**, reducing researcher bias and using procedures such as double-blind techniques. **Reliability** can be improved by using clear, **standardised procedures and objective measuring tools** so that the study can be repeated consistently.

Some improvements may strengthen both. For example, keeping the testing environment the same for every participant can improve validity by reducing confounding variables and improve reliability by making the procedure more consistent and replicable.

A psychologist investigated whether sleep affects attention. One group slept for four hours and another slept for eight hours before completing an online reaction-time test using their own devices at home.

Validity issue

Participants may have consumed different amounts of caffeine before the test. This could affect reaction times and reduce internal validity because differences may not have been caused solely by sleep duration.



Reliability issue

Participants completed the task on different devices and in different surroundings. This reduces reliability because the procedure was not fully standardised and may produce inconsistent results if repeated.



Remember, Some improvements, such as controlling conditions and standardising procedures, can strengthen both validity and reliability. Always explain clearly which one is being affected and why.



Try these two sample questions:

A psychologist investigated whether exercise improves mood. One group completed a 20-minute workout, while another group sat quietly. Participants chose which group they wanted to join before completing a mood questionnaire..

Identify one issue of validity in this research and describe how you could deal with this issue of validity [3].



A psychologist observed aggressive behaviour in a playground. One observer recorded any behaviour they personally considered aggressive, without using a predefined coding system.

Identify one issue of reliability in this research and describe how you could deal with this issue of reliability [3].



Check the answers page for sample responses.

Issue #5: Writing hypotheses correctly

Hypothesis questions are often straightforward, but marks are easily lost through vague wording. A good hypothesis should:

- identify the **IV and DV**;
- **operationalise** both variables;
- state a direction if it is **directional**;
- use “there will be a difference” if it is **non-directional**;
- use “there will be no significant difference” for a **null** hypothesis.



Remember: use the word **correlation** only when the study investigates a relationship between two co-variables, not when it compares experimental conditions.

A psychologist investigated whether listening to instrumental music affects concentration. One group completed a proofreading task in silence, while another completed it while listening to instrumental music. The number of errors correctly identified was recorded.

Weak directional hypothesis

Students listening to music will concentrate better than students working in silence.

This is too vague because “concentrate better” has not been operationalised.

Improved directional hypothesis

Students who complete the proofreading task while listening to instrumental music will correctly identify more errors than students who complete the task in silence.

IV identified and operationalised, DV identified, DV operationalised, directional aspect.

Write the null hypothesis for this research below:

Check the answers page for sample response.

Try these:

A psychologist investigated whether using coloured paper affects reading comprehension. One group read a passage printed on white paper, while another group read the same passage on yellow paper. Participants then completed a 15-question comprehension test.

Write a directional hypothesis for this research:



Write a non-directional hypothesis for this research:



Write a null hypothesis for this research:



Check the answers page for sample responses.

Issue #6: Trying to include too many issues

Research-methods questions often ask you to identify and explain one issue of validity, reliability or ethics. Giving several different issues will not earn extra marks and can make your answer unclear. Choose the strongest point and explain it fully, using clear links to the study.

A psychologist asked 15-year-old students to complete a questionnaire about their experiences of bullying. The students were told that their answers would be anonymous, but the psychologist asked them to write their names on the questionnaires.

Identify and explain one ethical issue in this study and explain how the psychologist could address it.[4]

Answer A

The study may be unethical because the students were deceived, their privacy was not protected, they could be distressed and they may not have given informed consent.

This answer mentions several possible issues but does not explain any of them clearly. It would probably achieve 1 mark for identifying an issue.

Answer B

One ethical issue is confidentiality. Although the students were told their answers would be anonymous, they were asked to provide their names. This could allow their responses about bullying to be identified. The psychologist should remove the request for names and use participant codes instead.

This response focuses on one issue only (confidentiality). Remember:

Choose one issue → explain why it matters → link it to the study → suggest an appropriate solution

You try this one:

A psychologist secretly recorded conversations between students in a school common room to investigate friendship patterns.

Identify and explain one ethical issue in this study and explain how the psychologist could address it.[4]

Answers



Answer A correctly identifies a validity issue and makes clear links to the research context. However, they fail to explain how the issue could be addressed, so the total mark would be 2/4. **Answer B** identifies an issue and explains how it can be addressed, but there are no links to the research context. This would receive a maximum of 2/4 marks.



Answer A correctly describes the process of snowball sampling but there are no links to the research context at all. 0/4. **Answer B** is much better with snowball sampling explained and linked to context. It needs a final line stating something like 'this process could continue until 30 participants had been recruited for each group.' 3/4



Allowing participants to choose the exercise or rest group could reduce internal validity because the groups may differ in motivation or fitness. Random allocation into exercise or rest groups would help ensure that any difference in mood was caused by the exercise, increasing internal validity.



The observation may lack reliability because "aggressive behaviour" was not clearly defined. Using a standardised checklist of specific playground behaviours would make the recordings more consistent, improving the internal reliability of the research.



There will be no significant difference in the number of proofreading errors correctly identified by students who complete the task while listening to instrumental music and those who complete it in silence.



Students who read the passage on yellow paper will score higher on the 15-question comprehension test than students who read it on white paper.



There will be a difference in comprehension-test scores between students who read the passage on yellow paper and those who read it on white paper.



There will be no significant difference in comprehension-test scores between students who read the passage on yellow paper and those who read it on white paper.



One ethical issue is lack of informed consent. The students did not know that their conversations in the school common room were being recorded or used to investigate friendship patterns. The psychologist should obtain consent before recording, or ask for retrospective consent and delete any recordings from students who do not agree.