

OCR Research Methods – Designing Your Own Investigation

In section B (research design and response) of component 1, you will be required to design your own investigation, from a novel source provided. In order to do well in this part of the exam it is essential that you apply knowledge from your own practical work.

This worksheet should be used once you have covered the research methods content within the specification and after you have experienced the following practical activities: self-report, observation, experiment and correlation.

What to Expect in The Exam?

At AS Level you will be given a 12-mark question and at A Level it will be a 15-mark question. However, the requirements for your answer are exactly the same. You will be given a scenario asking you to plan an investigation; some examples are below:

1. Explain how you would carry out an experiment into the effect playing video games has on alertness.
2. Explain how you would carry out an observation into the differences in behaviour in the sixth form common room, when teachers are present and when they are not.
3. Explain how you would carry out a self-report to investigate whether personality has an effect on what type of music young people like to listen to.
4. Explain how you would carry out a correlation between levels of ice cream consumption and number of accidents at the seaside.
5. Explain how you would carry out an experiment to investigate memory improvement techniques used by students while revising.
6. Explain how you would carry out an observation into the use of mobile phones in public places.
7. Explain how you would carry out a self-report to investigate personality traits of those who regularly use Facebook.
8. Explain how you would carry out a correlation between a person's ratings of how attractive clowns are and how much they are scared of them.
9. Explain how you would carry out an observation or an experiment into gender differences in stressful situations.
10. Explain how you would carry out a questionnaire investigating why different students choose different A Level subjects.

Furthermore, the question will also ask you to refer to 3 required features within your answer at AS Level and for you to refer to 4 required features at A Level. These could come from any part of the research methods content that you have learnt and could refer to the type of investigation, sampling method, experimental design, controls, ethics, reliability, validity, or even data analysis.

For example: Explain how you would carry out an experiment into the effect playing video games has on alertness.

You must refer to:

- laboratory or field experiments
- experimental design
- sampling method (12 marks)
- at least one control you would use (15 marks)

You should use your own experience of carrying out an experiment to inform your response. Justify your decisions as part of your explanation.

Attention - How to Do Well On This Question?

In order to be able to access the top mark band for this question, it is essential that you meet the four requirements that examiners are looking for, these are:

1. Addressing all of the required features (the 3/4 bullet points)
2. Justifying your design decisions
3. Contextualising your answer – applying your knowledge to the scenario
4. Explicitly linking your design decisions to your own practical work

1. Addressing All of the Required Features

This is exactly what it says on the tin. If you do not consider all of the required features you will be seriously compromising your mark. For example, if you only include 2 out of the 3 features, that is a maximum of 8 marks! If you only include 1 out of 3 features, you cannot get beyond 4! Nothing else is required: if you mention how you are going to display your data and it isn't a required feature, no marks will be awarded - so don't waste your time.

2. Justifying Your Design Decisions

The best way to do this would be to identify strengths as a way of justification, or even a weakness to justify why you are not using a particular design.

For example:

- I would use a field experiment because it has higher ecological validity than a lab study; therefore, I can generalise my findings to the real world.
- I would use a lab experiment instead of a field experiment in my investigation, because field studies have low levels of control and can be influenced by confounding variables.

Try this yourself with experimental design:

- I would use a repeated measures design because...

- I would use an independent measures design because...

3. Contextualising Your Answer – Applying Your Knowledge to The Scenario

Even if you have good knowledge and understanding of all of the required features, you will be limited in the amount of marks you achieve unless you can apply your knowledge of them to the scenario, in this case video games and alertness.

For example:

- I would use a self-selected sample for my investigation, I would gain participants by putting an advertisement in a video game magazine asking for volunteers to take part in my study.

Or even better, justify your decision whilst contextualising:

- I would obtain my sample in this study by using random sampling. I would obtain all of the names of members of the gaming society at College: they would be my target population. I would then put all of their names in a hat and the first 20 to be chosen would be my participants. Furthermore, I would then put all the names of psychology students at College in a hat and choose 20 of them: they would be my control group. Random sampling would be the best sampling method for this study, as it is not biased as everyone has an equal chance of being selected. This would be better than volunteer sampling as certain types of people may want to take part and therefore the study would lack population validity. By using random sampling I could generalise my findings.

Try this yourself with experimental design:

- I would use a repeated measures design because....
- I would use an independent measures design because...

4. Explicitly Linking Your Design Decisions to Your Own Practical Activities

During your study of AS/A Level psychology you should have had lots of fun carrying out practical activities. This is your opportunity to show the examiner what you have learnt from these experiences and how they have informed your design decisions. OCR recommend that you keep a record of your practical activities, so you can reflect on them as much as possible and then use them in the exam. Remember the exam question will state that *'you should use your own experience of carrying out an experiment to inform your response.'* If you do not do this then you cannot achieve a top band answer.

For example: I would use a lab experiment in my investigation because they have higher levels of control than field experiments; therefore, I can make causal conclusions in that the IV causes the DV and the effect of confounding variables can be reduced.

I know this from my own practical experience when I carried out an experiment into whether the length of words had an effect on the number of words recalled. Apart from one group being given one syllable words and the other condition three syllable words, everything else was standardised. All participants were in the same room, at the same time, they were given 5 minutes to learn their 20 words in silence and then a further 2 minutes to recall them. Due to the controlled conditions I was confident that participants in the 1 syllable condition remember more words because of the word length and not due to any other factor.

Try this yourself with experimental design:

- I would use a repeated measures design because...
- I would use an independent measures design because...

Sample Question

Explain how you would carry out a self-report to investigate the effects of Facebook use.

You must refer to:

- a questionnaire or an interview
- open or closed questions
- how you may check the reliability of responses (12 marks)

You should use your own experience of carrying out an experiment to inform your response. Justify your decisions as part of your explanation.

Task: Read the answer below and highlight in a different colour, where the answer addresses each of the following points:

1. Addressing all of the required features (the 3/4 bullet points)
 - a questionnaire or an interview
 - open or closed questions
 - how you may check the reliability of responses
2. Justifying your design decisions
3. Contextualising your answer – applying your knowledge to the scenario
4. Explicitly linking your design decisions to your own practical work

Sample Answer

For my investigation into the effects of Facebook use, I would carry out a questionnaire. The reason for this is that compared to an interview, they are a much quicker way of getting a large amount of data from many participants. This is because they just need to be handed out and returned; interviews are much more time consuming as interviewees are questioned one at a time, so the number of participants is also going to be less than with a questionnaire. I found this out when I carried out my research at school into attitudes towards mental health in different age groups. I was able to get 20 members of my class to fill in their questionnaires for 5 minutes at the same time at the end of a lesson. However, when replicating Loftus and Palmer's study, it took the same amount of time to interview one participant, therefore leading to me having a small sample and having difficulties generalising my results. As all my participants are all Facebook users I will send them the questionnaire online; they can then quickly fill in the questionnaire and email their responses back to me.

Within my questionnaire, I would use closed questions such as the following: using a Likert scale (ranging from 1 strongly disagree, to 5 strongly agree)

Facebook makes friendships stronger

I feel irritable if I cannot log into Facebook

I prefer chatting to my friends on Facebook or face to face

I am naturally an outgoing person

Facebook has made me more confident

I am addicted to Facebook

Facebook has helped me make friends

I would use closed questions to gain quantitative data. This is beneficial because the data is numerical from a Likert scale and can therefore be analysed more easily than qualitative data. I can also summarise my data more easily into graphs and charts and work out measures of central tendency. For example, I can work out the mean 'facebook addiction' score for different personality types and compare 'confidence' scores in a bar chart. This is much preferable to qualitative data which is more difficult to analyse. When I carried out research into reasons for obedience, I included open questions in my questionnaire and as a result I got a wide range of responses from my friends which was difficult to categorise. Using closed questions overcomes this problem.

I would check the reliability of responses by using the split-half method; this enables the researcher to see if participants' answers are consistent by asking the same question again in a slightly different way or in reverse. From my own research into attitudes towards mental health, my teacher advised that we used this technique in our questionnaire to check for the consistency of responses. For example, one participant answered that they strongly agreed that stigma towards mental health has reduced over the past 10 years; however, later on in the questionnaire they 'strongly agreed' that stigma has increased over the past 10 years. This participant's results were removed as they lacked reliability. Within this questionnaire I would also use the split-half method by including questions such as: Facebook weakens friendships and Facebook has made me less confident, which are the reverse of the questions above. This is to check the reliability of participants' responses; if these answers contradict each other the data will be removed as the results are unreliable. Therefore we can be sure that the results are reliable.

Sample Answer – Highlighted

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Examiner Commentary

This is clearly a 'good' top band answer and would achieve 12/12 marks. There is accurate and detailed knowledge and understanding of each feature in the context of the Facebook investigation. There is also good evidence of application of these required features in context. There is appropriate justification of all decisions and there is a well-developed line of reasoning that is clear and logically structured. There is explicit reference to practical work and there are links between own practical work and this investigation.