Lesson activity: practical activities for research methods

Activity 1: investigating short term memory

Research suggests that Short Term Memory (STM) cannot hold very much information. You are going to design and carry out an experiment to see whether the capacity of STM differs between two groups: A-level students and older people.

Tasks

Generate a hypothesis for this study. Justify the direction of your hypothesis. Identify the IV and DV in this experiment.

Devise a brief and suitable set of instructions that will be read or given to participants in order to:

* gain their consent to take part
* enable them to carry out the task appropriately.

Materials

In small groups devise and justify an appropriate task for measuring the capacity of STM. This might be a world list containing about 20 words. Think carefully about the materials you will use and explain why these factors need to be controlled, eg:

* length of words
* type of words
* number of words
* word presentation.

Participants

Decide upon and justify your choice of participants for the two conditions (the two age groups). Identify and justify your sampling method.

Ethical issues

Before you collect your data, identify and address any relevant ethical issues which may arise from the study you have designed. For example, consider how participants will be debriefed afterwards.

Results

Once you have collected your results, produce a summary table which includes appropriate measures of central tendency. Also generate an appropriate graphical display. Ensure these are appropriately labelled and have a title.

Activity 2: investigating handedness

Research suggests that around 10% of the population are left handed or 'sinistral'.

You are going to design a study to compare two types of A-level student. You are aiming to see whether left handedness is more common in some subject groups, such as art students or geographers.

Tasks

Consider whether you will carry out an observation – eg by counting the number of left handers and right handers from within lessons you attend, or whether you will use a verbal survey of students in the common room.

Materials

Describe any materials needed for your chosen method. Remember, if someone wanted to replicate your study they would need to know exactly what you did.

Participants

Describe and justify your choice of the A-level subject groups you have chosen for this investigation. Include information about the size of the sample in each condition.

Ethical issues

Consider and compare at least two ethical issues associated with each method before deciding which one you will use. How, for example, would you gain consent from students you are observing? How would you gain consent from a verbal survey?

Identify and justify the type of data (level of measurement) you will collect (will it be nominal, ordinal or interval?).

Consider two potential methodological variables associated the use of your chosen method. For example, are demand characteristics likely to be a problem?

Results

Once you have collected your data, summarise it into a correctly labelled pie chart for each of the subject group you measured (eg artists and geographers). Do your findings reflect 10% left handedness in both groups?