Experimental design

Experimental design refers to the way in which participants are used in experiments. This means the different ways in which the testing of participants can be organised in relation to the experimental conditions.

**Independent groups**

Independent groups is when the participants allocate to different groups where watch group represent on experimental condition.

**Evaluation for independent groups**

The issue with independent groups design is that the participants who occupy the different groups are not the same people. This could cause the mean difference between the groups to be caused by individual differences rather than a stimulus. To deal with this problem however, researchers use random allocation. Random allocation attempts to evenly distribute participant’s characteristics across the conditions.

Independent groups are less economical because more participants are required compared to repeated measures.

One advantage of independent groups in that the order effect won’t take place as the participants only contributes in one condition.

**Repeated measures**

Repeated measures is when all the or all that takes part in all the conditions in the experiment. Participants usually go through the control condition first before the experimental condition.

**Evaluation for Repeated measures**

One issue with repeated measures is that each participant has to do a task which will cause an order effect. Order effects refer to the order of the conditions having an effect on the participants’ behaviour. The order effect also arises because the repeating two tasks could create boredom or fatigue that causes poor performance on the second task. Any orders could act a confounding variable. It is also more likely participants will work the aim of the study when they experience all conditions. For this reason, demand characteristics tend to be more of a feature of repeated measures design. (Counter balancing is an attempt to control the effect of order in a repeated measured design: half the participants experience the conditions in one order and the other half in the opposite order.)

One strength of using repeated measures are that participants variables are controlled and fewer participants are needed.

**Matched pairs**

Matched pairs is when the participants are paired with similar variables that might have an effect on the DV such as IQ. The one member of the pairs is assigned to condition A and the other to condition B.
Self-report techniques

Self-report technique is any methods which are asked to state or explain their own feelings, opinions, behaviours and/or experiences related to a given topic. They come in the form of questionnaires and interview.

Questionnaires

This is a pre-set of writing questions used to assess a person thoughts or experience. They come in either closed or open question. They are cost effective and can gather large amount of information quickly. However, the response might not always be truthful. This is because participant wants to keep themselves in a positive light which is known a form of demand characteristics called social desirability.

Closed has a fixed number of responds such as ‘yes’ and ‘no’ this might also include ratings from 1-10. This is a good way to gain quantitate data.

Open question is when the question can have a wider range of responses and is not fixed to a particular answer. This gives the researcher a broader depth of detail which is good qualitative data. However, this may be harder to analyse

Interviews

Interviews are a face to face interaction been the researcher and participants where the participants is asked a set of question assessing the interviewee thoughts and or experiences. They may either pre-set or develop as the interview goes along.

Structured interviews are made up of a pre-determined set of questions that are asked in a fixed order. This is when the interviewer asked a question and waits for the responds. These are simple for other researchers to replicate because of their standard form. However, given the nature of a structured interview, for interviews to deviate from the topic or elaborate their points.

Unstructured interviews work like a conversation. There are no set questions. There general aim that certain topics will be discussed, and interaction tends to be free-flowing. The interview is encouraged to expand and elaborate their answers as prompted by the interviewer. Unstructured interviews are much more flexible. The interviewer can also follow up points that arise and much more likely to gain insight. However, the researcher might shift off topic and drawing a conclusion might be difficult.

Semi-structured interviews are in between where there are pre-set questions but also involves set free-flowing questions.