**9.1.1 Control issues**

Control issues are variables or factors of an experiment that can affect the results.

**Counterbalancing:**

* Used to reduce order effects like practice, fatigue and boredom (these may all affect the validity of the study)
* Used for repeated measures designs. The group is split in half and one group does condition 1 then to while the other does condition 2 then 1.
* Can be used in independent measures if the participant has to go through many trials in the condition.

**Order effects**:

* Differences in participants responses that result from the order in which the experimental materials are presented to them.

**Experimenter effects**:

* Interviews – the interviewer may unintentionally influence participants responses in the way that they deliver questions to them
* Experiments – where the experimenter influences the direction of the data, by helping participants more than they should or hindering participant performance to get their desired results.
* May be intentional or unintentional.
* Fixed with a single blind or double blind procedure.
* May be aspects of the researcher’s appearance or behaviour that can lead participants to think that they should act in a particular way.

**Social desirability:**

* Tendency of survey respondents to answer questions in a manner that will be viewed favourably (e.g. over-reporting good behaviour and under-reporting bad behaviour)

**Demand characteristics**:

* Occur when participants receive a que of what they believe that the researcher expects to find.
* Participant will alter their behaviour to conform to the experimenters expectations.

**Participant variables**:

* Characteristics of each participant that may impact how they respond (e.g. mood, anxiety, intelligence).
* Can be controlled using standardised procedures, matched pairs/repeated measures design.

**Situational variables:**

* The impact the environment has on how the participants responds (e.g. noise, light, temperature, smell).
* Can assess the effects of this using a pilot study, fixed using standardised procedures.

**Extraneous variables:**

* Any variable that could affect the DV that isn’t the IV
* Need to be controlled so that we can be sure that it’s the IV affecting the DV (so we can establish a cause and effect relationship)

**Confounding variable:**

* A lurking variable that correlates with both the IV and the DV (an EV that affects the DV)

**Operationalization of variables:**

* Making the variables measureable.
* Researcher clearly defining and showing how they’ll measure a specific variable.
* IV –making sure that the difference between the experimental and control condition is big enough to see a manipulation
* DV –making sure we are only measuring the behaviour we aim to test and making sure that nothing else will affect the measurement.
* Having a precise and accurate way of measuring the factor being tested.