Preparing for the Internal Assessment: INTRODUCTION section

*The Psych IA is explained in the OUP textbook, p488-512. Read p493-4 for details about the introduction.*

**Research and null hypotheses**

In experimental research, psychologists first must state what they predict will happen. To do this, we state a null and a research hypothesis.

The **null hypothesis** states that there will be no significant effect of the manipulation of the independent variable on the dependent variable -in other words, the null hypothesis states that any difference found is due to chance and not the manipulation of the independent variable. In fact, it is the null hypothesis that is tested as a researcher normally wants this to be refuted.

The **research hypothesis** predicts *how*the independent variable is expected to affect the dependent variable. Simply stating that the independent variable will affect the dependent variable is not enough; the actual effect should be clearly predicted.

A well-written hypothesis is clearly **operationalized**. This means that the IV and DV are stated in a way that is *measurable*. Simply stating that “Noise will have an effect on learning” is not an operationalized hypothesis. What is meant by “noise?” How are you going to measure “learning?” An operationalized hypothesis for this study might be: *Participants* who *listen to classical music while reading a description of a new school* (IV) *will be able to recognize more details about the school from a list of statements (DV) than students who read the text in silence*.



Practice Task 1: you are designing an experiment to see if eating M&Ms increases memory retention. Be sure to indicate how you will measure variables 🡪 operationalize.

Write the **null hypothesis** (make sure the word ‘significant’ is in there):

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Write the **research hypothesis** (make sure the word ‘significant’ is in there):

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

The **aim** was to investigate whether there is a higher recall of words using the method of loci in free recall than using no memory technique.

The null hypothesis for the experiment above would be: *There will be no significant difference in the number of details about a school that a participants will recognize from a list of statements when listening to classical music or under silent conditions.*

Remember that the goal of research is not to *prove*the research hypothesis correct, but to *refute*the null hypothesis. In other words, we want to establish that there actually is a relationship between the IV and the DV, and that any results we have obtained were not just due to chance. When we can statistically establish that the results are not due to chance, the data are **significant**. When the data are significant, we *refute the null hypothesis*. When our data are not significant, we *retain the null hypothesis*. This simply means that the IV did not cause changes in the DV.

Practice Task 2: With your partner, think back to one experiment we studied in Bio (so far) or Cog. Write the null & research hypothesis. Be sure to indicate how you will measure variables 🡪 operationalize.

Write the **null hypothesis** (make sure the word ‘significant’ is in there):

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Write the **research hypothesis** (make sure the word ‘significant’ is in there):

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Gallery Walk – let’s take 5 mins to stretch and read statements from at least 2 other groups.