##### STUDENT NOTES ON PSEUDOHOMOPHONE PRACTICAL 4

**Homophone – A real word that sounds like another (e.g. Deer** *sounds like* **Dear)**

**Pseudohomophone – A non-word that sounds like a real word (e.g. ‘Bild’ *sounds like Build,* or ‘Brane’ *sounds like Brain*)**

**Real word (not a homophone) – e.g Coin, Club, Born, Deep.**

**Non -word (not a homophone) – e.g. Baif, Cleb, Deur, Coan.**

# Analyses in PsychoPy

Your Excel data file will contain two tabs – ‘training’ & ‘testing’. It is data from the ‘testing’ trials that we need to analyse. Select the ‘testing’ tab.

Select the header for nonwordType (cell A1) and then sort A-Z. Average across the key\_resp.RT\_mean values for both the PSEUDOHOMOPHONE and the CONTROL conditions of nonwordType.

**Write down on the piece of paper the following information to give to demonstrator:**

The **Age** in years, **gender**, and which **condition** the participant did **GROUP A or GROUP B**. You need also to write down their **reaction time for the control and the pseudohomophone conditions (these represent the different types of non-words used in the testing phase).**

# Design

Participants were asked to identify the REAL WORD in the training and experimental phases of the experiment (i.e. it is a lexical decision task).

|  |  |  |
| --- | --- | --- |
|  | **Group A**  **Training with homophones** | **Group B**  **No training with homophones** |
| *Training Phase* | **Homophones paired with non-words, (e.g. DEAR /DEUR) and real words paired with non-words (e.g. COIN / COAN).** | **Real words paired with non-words.**  **(e.g. CLUB / CLEB)** |
| *Testing Phase* | Real words paired with pseudohomophones (nonwords) (e.g. BORN / BILD), and real words paired with ‘normal’ non-word “controls” (e.g. DEEP/ BAIF) | Same stimuli and procedure as participants in Group A had. |

# Analyses in SPSS

There are 4 simple analyses you need to do.

1. Firstly you need to know how many males and females participated.

Go to ANALYSE/ DESCRIPTIVES/ FREQUENCIES

1. Next to get the mean age of participants.

Go to ANALYSE/ DESCRIPTIVES/ DESCRIPTIVES

1. Finally we are going to do your statistical test to compare performance between groups. We want to know if those in Group A *who received training on homophones* showed a stronger pseudohomophone effect than those who *did not receive training on homophones* in the Group B.

So we are going to do a **t-test** to compare the two groups. Because you have 2 *different* groups (people in group A were different people from those in group B) we are going to do an independent samples t-test. This means participants in one condition did not take part in the other condition so it is a between groups comparison.

SELECT ANALYSE/ COMPARE MEANS/ INDEPENDENT t-test/

You need to specify the 2 conditions of the two groups you want to compare.

Move *condition [cond]* to GROUPING VARIABLE.

CLICK ON “define groups” (this is necessary to tell the computer what the 2 groups are we are comparing)

For GROUP 1 – type **0** (this is the homophone trained group)

For GROUP 2- type **1** (this is the non-trained group)

The dependent variable is the DIFF score – you should move this variable over to the TOP BOX (*test variables box)*. The DIFF score is the difference in reaction time performance between the PSEUDOHOMOPHONE and the CONTROL for participants i.e. it is a measure of the size of the **pseudohomophone effect**!

Remember to check the Levene’s test to determine which row you read your t statistic from!

What sort of graph might you use to display your data?