1. The independent variable is the congruency of the words. It has two levels: *congruent*, where the colour of the text matches the word and, *incongruent*, where the colour of the text does not match the word.

The dependant variable is the length of time in seconds it takes a participant to read the colour of the text of each word aloud.

1. A null hypothesis is that the congruency of the words does not affect the length of time it takes to read them. An alternative hypothesis is that the congruency does affect the length of time. Specifically, we hypothesize that it takes longer to read the incongruent words as the mismatch between colour and word requires a little more thought by the reader. So, statistically our hypotheses are:

H0: xbari =xbarc

H1: xbari > xbarc

We will perform a one-directional dependant samples t-test to test if the mean of the times taken to read the incongruent words is greater than the mean for the congruent words.