

# Stroop Effect experiment data analysis

## Project discription

This project analysed a dataset from a Stroop Effect experiment.

Detailed information about this experiment:

<https://faculty.washington.edu/chudler/words.html#seffect>

The dataset from:

<https://drive.google.com/file/d/0B9Yf01UalbUgQXpYb2NhZ29yX1U/view>

## Independent variable and Dependent variable

The independent variable is the wordset used in the test

The dependent variable is the total time that participants used for a wordset.

## Hypotheses

Null Hypotheses( $H_0$ ):  $M_D = 0$

Time difference for Congruent wordset and Incongruent wordset is 0.

Aterlative Hypotheses( $H_1$ ) :  $M_D \neq 0$

Time difference for Congruent wordset and Incongruent wordset is not 0.

## Statistical test

This is a two-tailed dependent test (no direction is predicted)

## Descriptive statistics

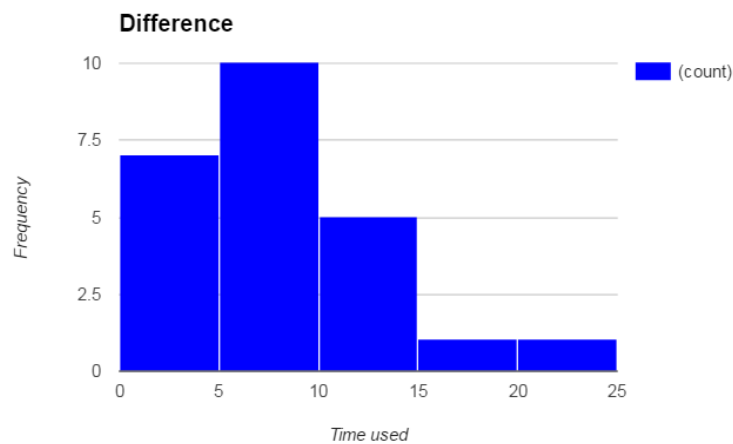
Table 1

*Results of Descriptive Statistics for Stroop Effect Experiment.*

Congruent			Incongruent			Difference		
M	SD	n	M	SD	n	$M_D$	SD	n
14.05	3.56	24	22.02	4.8	24	7.96	4.86	24

Figure 1

*Histogram of time difference between Congruent test and Incongruent test.*



This is a positive skewed distribution

## T-test

Table 1

*Results of T test for Stroop Effect Experiment.*

Mean of Difference				
M	SE	t-value	t-critical	df
7.96	0.99	8.02	2.064*	23

\* $p < .05$

Results of the t-test show a statistically significant mean difference between Congruent test and Incongruent test, null hypothesis rejected, participants tend to spend more time in naming colors for Incongruent wordset.