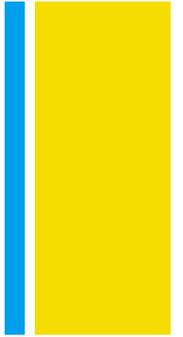


# Stroop Effect

Alyssa Delp, Kaitlin Fagan, Sam Ladavich,  
Erin Lafferty, Hali Strickler

+

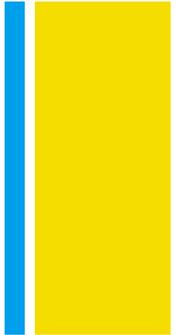
# Hypothesis



Reaction time of the desired target will increase when the color of the typography does not match the orthographic representation of that color as they do not prime for the same target.

# + Methodology

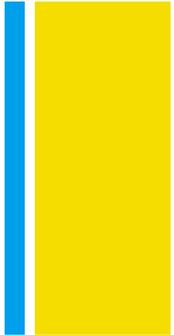
- Identical directions were read before each test to all participants
- Presented on a Power Point on a lap top
- Pretest consisting of blocks of colors and words
  - Tested for color blindness and dyslexia/reading ability
  - 20 slides (10 color blocks, 10 words)
- Name the color test
  - 20 slides (10 experiment, 10 control)
- Name the word test
  - 20 slides (10 experiment, 10 control)
- Stopwatch on iPhone
  - Had participants hit the lap button to record time and space bar to change the slide



**YELLOW**

**YELLOW**

# + Consent Form



Name: \_\_\_\_\_

Age: \_\_\_\_\_ Gender: \_\_\_\_\_

Phone Number: \_\_\_\_\_

E-mail Address: \_\_\_\_\_

Are you willing to take a colorblind test? \_\_\_ Yes \_\_\_ No

This study examines the response time of participants in regards to the effects of perception and lexical retrieval. Participants will be influenced by color and orthographic representation (written spelling) for a specific target.

By signing below, you agree to volunteer your time by participating in this study. The information you will provide will be recorded anonymously and will be kept completely confidential.

Questions will be welcome about the research at any time. Your participation in this study is completely voluntary. You may refuse to participate at any time without consequence or prejudice.

Signing your name below indicates that you have read and understand the contents of this Consent Form and that you agree to take part in this study.

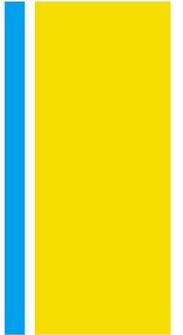
\_\_\_\_\_  
Participant's Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Researcher's Signature

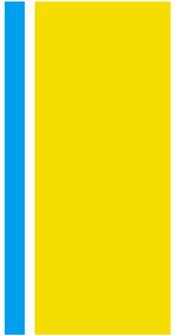
\_\_\_\_\_  
Date

# + Subjects



- 25 subjects between the ages of 17-51
  - 14 Females
  - 11 Males
- Quiet environment with limited distractions

# + Analysis



- Hypothesis was supported
- Name the color
  - Experimental group
    - Mean = 1.0216
    - Standard deviation = .31899
  - Control group
    - Mean = .9977
    - Standard deviation = .33572
- Read the word
  - Experimental group
    - Mean = .7298
    - Standard deviation = .26912
  - Control group
    - Mean = .7237
    - Standard deviation = .25478

# + SPSS Outputs

- Naming the color was statistically significant
  - Reaction time of naming the color within the experimental groups was higher in comparison to reading the word

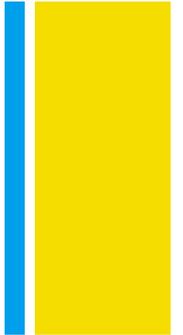
**One-Sample Statistics**

	N	Mean	Std. Deviation	Std. Error Mean
read_word_EX	250	.7298	.26912	.01702
name_color_EX	250	1.0216	.31899	.02017

**One-Sample Test**

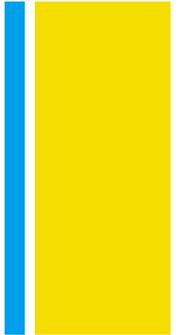
	Test Value = .05					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
read_word_EX	39.940	249	.000	.67980	.6463	.7133
name_color_EX	48.162	249	.000	.97164	.9319	1.0114

# + Discussion of Results



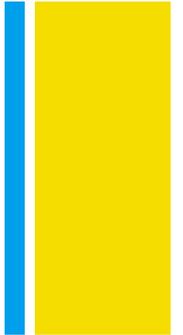
- Control slides (when the color matched the word) in both tests took less time
- Naming the color proved to be statistically more difficult than reading the word when comparing experimental groups (when the color did not match the word) from both tests
  - Elicited higher reaction times

# + Limitations



- Technological delay
- Human error
- Misinterpretation of directions
- Visual processing error
  - Participants commented on closeness between red and orange
- Coordination
  - Older participants had more trouble tapping the lap button on the iPhone while looking at the computer screen

# + Interesting...



- During the pretest, the word “giraffe” was interpreted as “graffiti” by three different participants
- When the first word written in yellow appeared in the name the color test, some participant's reaction times were high