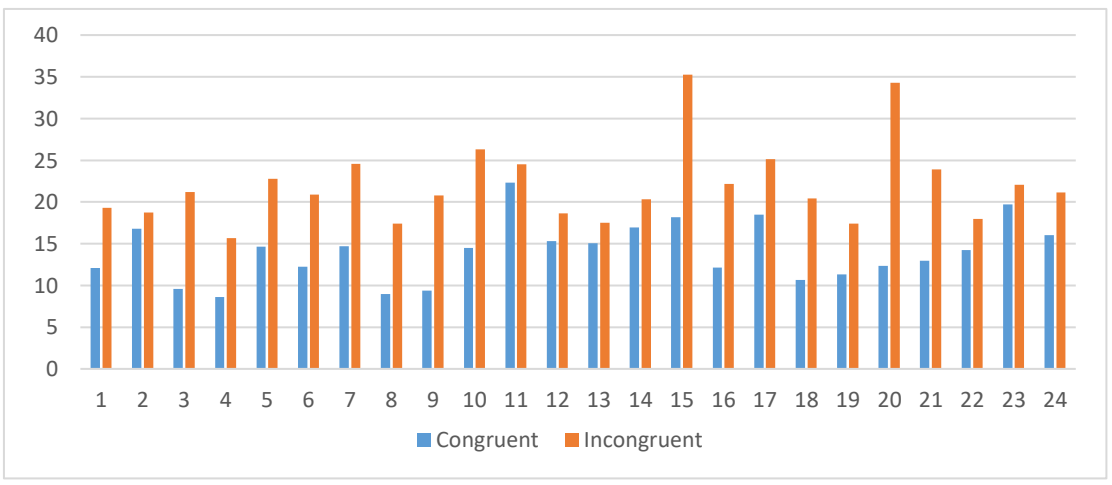
Question 1: Identify variables in the experiment	Independent variables are the names of colors. Dependent variables are the color of the font.	
Question 2a: Establish hypotheses	Null hypotheses : Time(Congruent) = Time(Incongruent). Different conditions but almost close time took. Alternative hypotheses : Time(Congruent) < Time(Incongruent). Congruent test took less time than Icongruent test.	
Question 2b: Establish a statistical test	When the written color name differs from the color ink it is printed in. If must say the written word, my opinion is that take all most same time as congruent, even if it can be affected, but minimal, just say the word. If must name the link color instead, we will get more affected, the brain needs to use more attention to recognize a color than to word encoding, so it takes a little longer. Then the experiment by name the link color should be significant and meaningful. The experiment is prefer to two tailed test, cos the less proportion, the shorter time or the longer time spent on population. Estimately normal distribution. **Assumptions: two-tailed and CI=95%.**	
Question 3: Report descriptive statistics	Min(Congruent)=8.63 Median(Congruent)=14.3565 Max(Congruent)=22.328 μ(Congurent)=14.051125 size(Congruent)=24 σ(Congruent-sample)=3.559357958 SE(Congruent-sample)=0.726550901	Min(Incongruent)=15.687 Median(Incongruent)=21.0175 Max(Incongruent)=35.255 μ(Incongruent)=22.01591667 size(Incongruent)=24 σ(Incongruent-sample)=4.797057122 SE(Incongruent-sample)=0.979195185
	z-score=±1.96	
	Cong_CI(95%) = (12.62708523, 15.47516477)	Incong_CI(95%) = (20.0966941, 23.93513923)
	As the values, especially μ and CI tell us time(Congruent) != time(Incongruent)	
Question 4: Plot the data		
	According to the graph, all people, own orange bar all higher than own blue bar, that means all Incongruent tests took longer time than Congruent tests.	
Question 5: Perform the statistical test and interpret your results	The samples are independent with the same size. Decision: Caculate pool the variance. (some values reference Q3) SE(pool)=1.219302842 t(z)-statistic=±6.532251 r^2=0.4812243 According to z-table, the P-value is very very very small, P-value < 0.0003. With assumption, z-critical = ±1.96 or t-critical = ±2.069. Compare t(z)-statistic and t(z)-critical, or check r^2, certainly, null hypotheses is rejected.	
Question 6: Digging deeper and extending the investigation	Primary simultaneous interpretation(two languages stroop) and numbers stroop that to count the number of words in each box, which Do NOT say what the word says and so on are similar to this test.	

Refer

https://en.wikipedia.org/wiki/Stroop_effect
http://baike.baidu.com/link?url=4t-mAs3S2dULT_8hZZr57s8lgmykHTs0Qmr27ikvBbAbEk5cZCyYCGvMfb3QwEVP9gA4gW2FHXjp4TJxKq4JPjF6zrd
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