

Letter Memorization

I distributed a sequence of letters and gave you 20 seconds to memorize as many as you can. Record how many you remembered correctly, and in the right order. _____ ?? _____

Every person received the same sequence of 30 letters, but they were presented in two different groupings. One group received

JFK-CIA-FBI-USA-SAT-GPA-GRE-IBM-NBA-CPR

and the other received

JFKC-IAF-BIU-SASA-TGP-AGR-EIB-MN-BAC-PR

Similar experiments have shown that those receiving the letters already organized in familiar chunks are able to memorize more than those with the less memorable groupings.

- a) Explain why this study is an experiment and not an observational study.

- b) Identify and classify the explanatory and response variables in this study.
Explanatory: _____ Type: _____

Response: _____ Type: _____

- c) Explain how random assignment was implemented and why it was important in this study.

- d) Explain how blindness was implemented and why it was important in this study.

- e) Create dotplots of the memory scores, comparing the two treatment groups.
[Hint: Be sure to label the horizontal axis.]
- f) Comment on whether these experimental data appear to support the conjecture that those who receive the letters in convenient 3-letter chunks tend to memorize more letters.
- g) If the JFK group does substantially better than the JFKC group, could you legitimately conclude that the grouping of letters *caused* the higher scores? Explain how you would respond to the argument that perhaps the good memorizers were in the JFK group and the poor memorizers were in the JFKC group.