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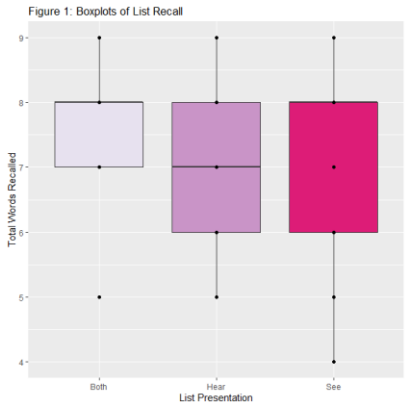
Mini Project 2

The purpose of this experiment was to find out how the manner in which a list is presented to someone (i.e., see the list, hear the list, or both) affects their ability remember the list. This is especially relevant in the field of education. If people are more likely to retain information based on whether it is presented visually, auditorily, or both, this could affect how teachers impart material to students or how students study.

As a class, we agreed upon an experimental design, and each group conducted the experiment according to this design and combined the data. We all used the same list of ten nouns (Clover, Whistle, Taxes, Legs, Hydrant, Dime, Girls, Quilt, Error, Beef) and the same recording of our professor reading the list. These words were randomly generated, nouns were chosen as opposed to other parts of speech because so they would not be too difficult to remember, and the voice recording was used so different voices and speaking speeds would not confound the experiment. We approached people around campus and asked them to participate. If they agreed, we used a random number generator to determine if they saw the list (1), heard the list (2), or both (3). If they saw the list, the participant got thirty seconds to read the list. If they heard, the list, the recording of the list was played twice. If they both heard and saw the list, they were given the list to read while the recording was being played simultaneously. Once they had seen or heard the list, or both, they had twenty seconds to name as many words from the list as possible. They did not have to list the words in order, and they were not penalized for saying a word twice nor naming a word that was not on the list. The data was stored in a spread sheet to import to R for analysis, though we also kept track of which words the participants got right by hand as it was faster to record the data that way than to input it into the spreadsheet.



A preliminary analysis of the results showed similar group means for each treatment (between 6.93 and 7.21). After running an ANOVA test, we got a p-value of 0.7557 (for α=0.05) and a small F-statistic. Thus, we were unable to reject the null hypothesis that the mean responses of the treatment groups were the same. We are therefore unable to conclude if people remember a list better if they hear it, see it, or both.

One of the problems my group ran into was playing the recording of the list. One of our participants heard a couple of words an extra time due to the recording not rewinding all the way and having to be restarted after a word was already said. Additionally, though participants were given twenty seconds to recall the words, many stopped before time was up, and others seemed to feel rushed. Further, we had not decided whether to provide commentary, such as when a participant would ask, "Have I said that word already?" Making further decisions about these questions could help the experiment run more smoothly. Also, there was loud music on North Quad while the experiment was being run, so any participants there had an environmental distraction others did not. To avoid environmental distractions, we could conduct the experiment inside in comparable, quiet rooms. Further analysis could be done to see if there was a tendency for people to remember certain words on the list versus others. We collected this data, but it was not part of our analysis.