

PSY 222 Research Methods (spring 2023)

Sample study preregistration, based on questions at aspredicted.org

1) Have any data been collected for this study already?

No, no data have been collected for this study yet.

2) What's the main question being asked or hypothesis being tested in this study?

The main goal is to see if we replicate the finding that deep processing leads to better recall than shallow processing. We are also testing whether concrete words are recalled better than abstract words. Finally, we are testing to see if the two effects combine—will deep processing of concrete words produce the best recall, and will shallow processing of abstract words result in the fewest words recalled?

3) Describe the key dependent variable(s) specifying how they will be measured.

The main dependent variable is the number of words recalled in each condition.

4) How many and which conditions will participants be assigned to?

There are two independent variables. The first variable, depth of processing, is a between-subjects factor: some participants will rate the pleasantness of words (deep), while other participants will count the number of vowels in each word (shallow). The second independent variable, word concreteness, is a within-subjects variable: half of the words are concrete nouns (e.g., piano), and half are abstract (e.g., crisis). Participants will be randomly assigned to either deep or shallow processing. All participants will be exposed to both concrete and abstract words.

5) Specify exactly which analyses you will conduct to examine the main question/hypothesis.

Our primary analyses will be graphical (plots of mean scores in each condition, along with a measure of variability such as a confidence interval). We will also conduct a 2 x 2 ANOVA (both classical and Bayesian) to examine the two main effects and the interaction.

6) Describe exactly how outliers will be defined and handled, and your precise rule(s) for excluding observations.

We plan to include all scores in the analysis. All decisions about any outliers will be done post hoc, and will be identified as such.

7) How many observations will be collected or what will determine sample size? No need to justify decision, but be precise about exactly how the number will be determined.

There are 20 students in class, and each student will be asked to test one person.

8) Anything else you would like to pre-register? (e.g., secondary analyses, variables collected for exploratory purposes, unusual analyses planned?)

No. Any additional analyses will be identified as exploratory.

PSY 222 homework: Class Research Study

Recruit a friend to participate in your study, which will take less than 10 minutes. Test your friend in a distraction-free setting. Do not show your friend the list of words. You will read the words to them, and record their answers. Do not tell your friend that there will be a memory test. It must be a surprise memory test. You will need a timer or clock with a second hand for this test.

Age _____ Gender _____ Years of school completed, including this year _____

Instructions to participant: This is a letter identification task I am doing for my psychology class. I will read you 20 words, one about every 5 seconds. Your task is to count the number of vowels in each word, without writing the words down. Only the letters A E I O U and Y should be counted. Tell me the number of vowels in each word. For example, if the first word was “happy” then you would say “2” because “happy” has two vowels, A and Y.

1. dollar
2. irony
3. railroad
4. quantity
5. impulse
6. alligator
7. vanity
8. event
9. valley
10. ocean
11. crisis
12. meadow
13. slipper
14. boredom
15. length
16. library
17. chance
18. bottle
19. piano
20. thought

Instructions to participant: Now, starting at 100, count backwards by twos as quickly and accurately as you can down to zero. I will time you. Ready? Go.

Instructions to participant: Now I would like you to recall aloud as many of the words as you can in 2 minutes. You can recall the words in any order. Ready? Go.

Circle any word the participant recalls correctly. Bring this completed sheet to the next class meeting. Thank your friend for helping out, and maybe buy lunch!

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Age _____ Gender _____ Years of school completed, including this year _____

Instructions to participant: This is a word attribute task I am doing for my psychology class. I will read you 20 words, one about every 5 seconds. Your task is to tell me how pleasant each word is, using a scale from 1 to 10. If a word reminds you of pleasant things, then give it a high rating like 9 or 10. If a word reminds you of unpleasant things, then give it a low rating like 1 or 2. Use any number from 1 to 10 to indicate how pleasant the word is.

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