Chapter 1: Psychology: The Study of Mental Processes and Behaviour

Lab 1.1

A replication of “Memory: A Contribution to Experimental Psychology” by Hermann Ebbinghaus (1885).

A number of early experiments from the history of psychology are actually quite simple to replicate. This method by Ebbinghaus simply involves a procedure for testing a model of memory that use constructed syllables as the stimulus.

Basically nonsense syllables are constructed by combing letters into “syllables” that consist of a consonant, a vowel and another consonant. “kac” for example.

The student should read Ebbinghaus’s original write-up:

http://psychclassics.yorku.ca/Ebbinghaus/index.htm

Especially chapter 3: “The Method of Investigation.”

http://psychclassics.yorku.ca/Ebbinghaus/memory3.htm

This original procedure is a bit involved, so students should simplify the procedure. There are a number of ways to do this, but you can probably think of others.

For one you don’t need all possible combinations of vowels and consonants. Just put together enough for your procedure.

You could also treat this as a test of syllable memory span. How many nonsense syllables can the average University student remember? This would be an indirect test of working memory capacity. Start with three, and go up from there. This is the way the digit span is tested on the Wechsler intelligence test. The statistics for this procedure are quite simple; just calculate a mean and standard deviation for the group.

You could design an experiment based on these stimuli. The independent variables could be verbal vs. written presentation; show them one list, read them another list, and do both for a third condition. Other independent variables that could be introduced are gender, time of day etc.

For this type of procedure you will need to do a t-test to see if there is a significant difference between your two groups. This can be calculated with SPSS, on an Excel

spreadsheet, or other statistical packages. The one I recommend is online at the VassarStats site.

For background information on statistical tests go here:

http://faculty.vassar.edu/lowry/vshome.html

To calculate a t-test and get a t and p value go here:
http://faculty.vassar.edu/lowry/vst.html

Design a study.
Conduct it.
Write up a report.
Submit it.

If your report is to be written in APA style, a model can be found here:

http://owl.english.purdue.edu/handouts/research/r_apa.html

or here (includes a sample APA-style research report):

www.uwsp.edu/psych/apa4b.htm