



Lab Experiment

Chapter 7: Memory

Lab 7.2

Replication of a Historical Memory Experiment

Memory: A Contribution to Experimental Psychology

Hermann Ebbinghaus (1885)

Translated by Henry A. Ruger & Clara E. Bussenius (1913)

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

The York University website contains the complete Ebbinghaus article, but this link is to the section that explains the methodology. An interesting experiment can be devised that uses some of Ebbinghaus' basic ideas. His procedure used nonsense syllables constructed of "a vowel sound being placed between two consonants." An interesting experiment can be devised using words versus nonsense syllables as the independent

variable.

Construct 20 nonsense syllables consisting of a vowel between two consonants - 'gah' or 'tuc', for example.

Develop a list of 20 three-letter words - 'sun' or 'ton', for example.

You can use sets of stimuli of different lengths if you like.

Arrange a group of approximately ten subjects. Give each of them a written list of stimuli, wait a minute or so, and then ask them to remember the list. Your dependent variable is the number of syllables or words (stimuli) remembered correctly. Having them write down the list would seem to be the most accurate method.

Now you can do a t-test on your results.

You will have two sets of numbers for each subject and you can enter your data in a table similar to the one below:

Subject	Number Correct	
	Nonsense syllables	Three-letter words
1		
2		
3		
4		
5		
6		
7		
8		

You can calculate a value for the “t” statistic and a “p” value in a number of ways. You can find the formula here:

http://biology.nebrwesleyan.edu/Courses/Labs/Biology_of_Animals/Statistics_Ttest.html

You can use an Excel Spreadsheet or SPSS if you have access to these programs.

For a very thorough explanation of descriptive and inferential statistics, go to:

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

To use their site to calculate a t-test, go to:

<http://faculty.vassar.edu/lowry/VassarStats.html>

Click on “t-tests and Procedures”.

Then select “t-tests for independent or correlated samples”.

Under “set up” choose “Independent Samples” if you used different people in each condition or “correlated samples” if you used the same person in each condition. The first type of procedure is called “between-subjects” the second “within subjects.”

Once you have clicked on “calculate” you will see your results with all the steps in the calculation and a “t” value and a “p” value for this set of data.

You can click on “printable report” to get this in a format that is easily selected, copied and pasted into your report.

Provide the following information about your experiment:

The names of the researchers

Your independent variable

Your dependent variable

Your hypothesis

The theory you think best explains your hypothesis

Your results in the form of the chart, steps, and t and p values. For example, the printable report from VassarStats.

Your conclusions