IntroQ Questionnaire: Lab Activities

At the beginning of each semester, I ask each student to answer, on paper (no names) or in a BlackBoard survey, each of these questions. I explain that these data will be used to help us learn how to do basic descriptive statistics.

A. What is your sex (gender)? Female or Male

B. What is the height **in inches** of your ideal mate?

C. What is the color of your eyes?

D. On a 0-10 scale, how frightened of this statistics course are you at this moment? (0 indicates not at all, 10 indicates extreme sympathetic arousal -- a racing heart, dry mouth, sweaty palms, queasy stomach, etc.)

E. On a 0 - 100% scale, how likely do you think it is that nuclear weapons (tactical or strategic) will be used in a war or terrorist activity sometime during your lifetime? I explain that 0 means absolutely certain it will not happen, 33% means you think it twice as likely not to happen as to happen, 50% means equally likely to happen as not, 67% means it is twice as likely to happen as not to happen, 100 % means it is absolutely certain to happen -- but I tell them their responses are not restricted to the values (0, 33, 50, 67, 100) used in the explanation.

F. What was your SAT Quantitative (Math) score? An approximation is OK.

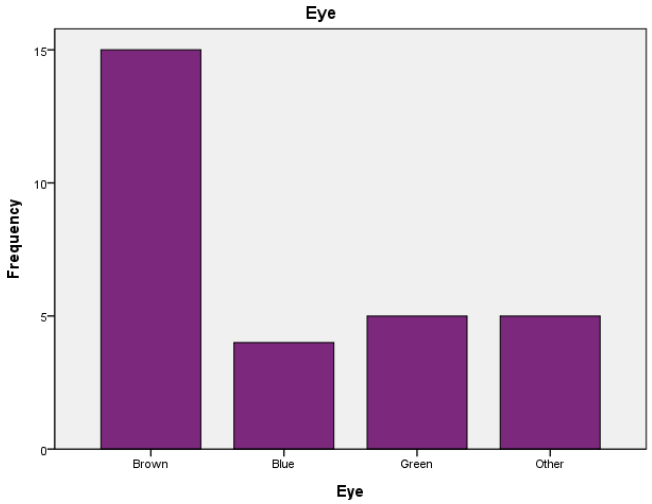
I have the students pass the data sheets up front, where they are shuffled. I ask one student to help me by calling out the values as I construct tables etc. With the BlackBoard survey, the data are downloaded into an Excel spreadsheet.

Using These Data to Illustrate Producing Frequency Distribution Tables and Plots

1. With the eye color data, prepare a frequency distribution table and a bar graph, arranging the categories in alphabetical order. Have one of the students read the eye color scores out to you, one by one, while you tally the frequencies, and then convert the tally marks into numbers. like this:

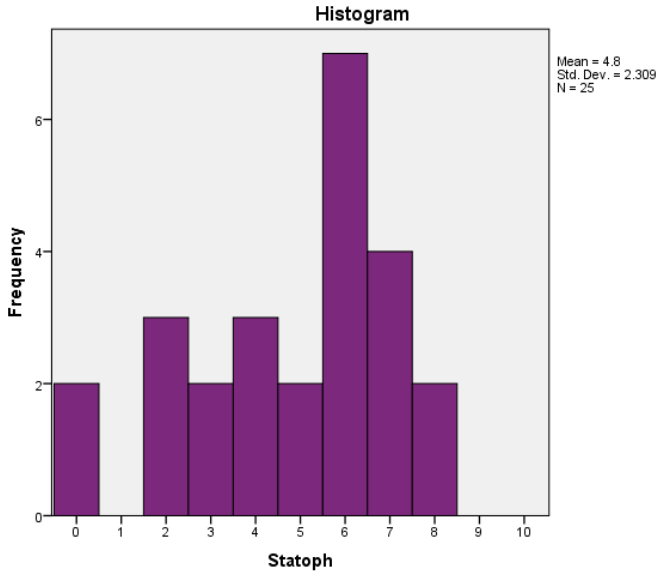
Score	Tally	Frequency
1 = Brown	||||\ ||||\ |||	13
2 = Blue	||||\ |||	8
3 = Green	||||\	5
4 = Other	||	2

Then draw, on the board, by hand, a bar graph, like this:



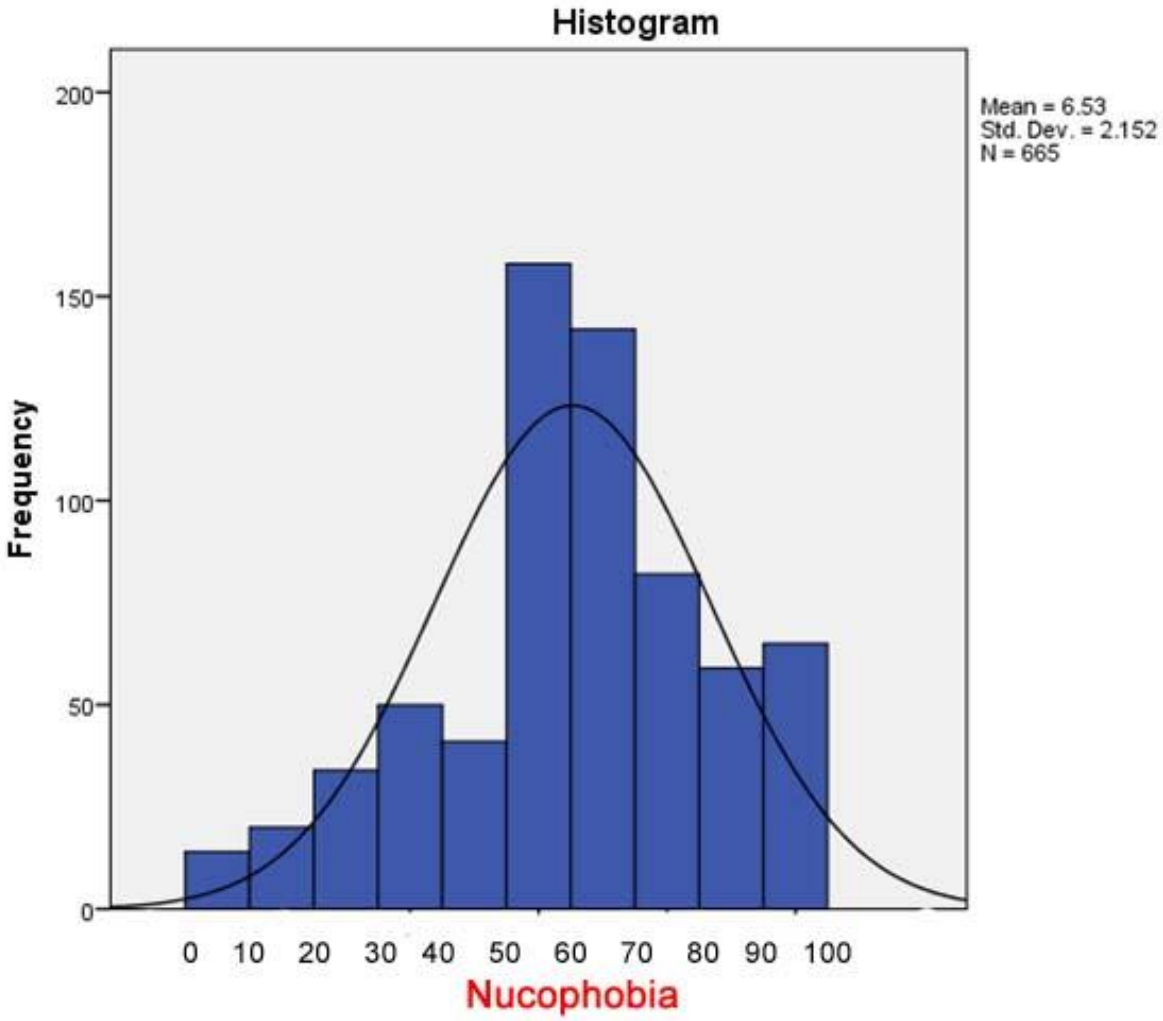
2. Do the same with the statophobia data, but the graph should be a histogram – no space between the bars except when the space represents a score with a frequency of zero. The example table here is for data across several years, the histogram is for data from 2012.

Statophobia	Frequency
0	9
1	17
2	15
3	35
4	38
5	93
6	67
7	110
8	120
9	47
10	43
11	1



3. We do the same with nucophobia, where we group the data as shown below. The data here are across several years.

	Frequency
< 10	14
10 - 19	20
20 - 29	34
30 - 39	50
40 - 49	41
50 - 59	158
60 - 69	142
70 - 79	82
80 - 89	59
90+	65
Total	665



Superimposed over the histogram is a normal curve with the same mean as standard deviation as our data. This can help one see whether the data are approximately normally distributed or not.

Computing Means, Medians, and Standard Deviations

Later we can work means, medians, and standard deviations on these data -- the Statophobia data are the easiest to do with a calculator.

I enter the data into a data file that I make available to the students. The coding scheme is as follows (when in a plain text file)

Variable	Columns	Comments
Gender	1	(1 = Female, 2 = Male)
Ideal	3-4	
Eye	6	(1 = Brown, 2 = Blue, 3 = Green, 4 = Other)
Statoph	8-9	
Nucoph	11-13	
SATM	15-17	
Year	19-22	

A period is used as the missing data code.

As of May, 2014, we have data from 704 students who have taken the course since 1983. At various times during the semester we use the collated data for exercises on contingency tables, *t* tests, correlation/regression analysis, etc.

My Buddy says “aarf, wazzup?”