

# Statistics Survey Project Assignment

## **1. Survey proposal**

Brainstorm possible survey topics, and then choose one. Your topic must be approved by me. Your survey as a whole must have a theme.

Before you write your survey questions, decide what you want to learn. The goals of the survey will determine what questions you will ask. What correlations will you look for? What will the results tell you about different demographic subgroups?

Write 10-15 survey questions. Your survey must include at least 2 quantitative questions which provide data about variables which you think will have an association (negative or positive).

Your draft survey questionnaire must be approved by me.

Your final survey questionnaire must also be approved by me.

## **2. Administer survey**

Plan your sampling procedure. Identify your population, decide on a sampling method, and how you will conduct your survey.

Administer your survey. You must get at least 50 completed surveys

If you choose to administer your survey on paper, you must enter the data manually so that you can analyze responses electronically. You may not use school copy machines or printers to produce copies of your survey. Please don't go to the library to ask people to participate in your survey.

## **3. Write survey report**

Organize, summarize and analyze your data. Use as many tools that we have studied in class as are appropriate.

Prepare a written report that documents your survey and presents the results. See rubric and expectations below.

## Survey Report Rubric

- Your report, including the graphs, must be produced on a computer. Your final report must be in a single file and must be submitted to me as a pdf file via email or a shared Google Doc.

*Your report should include each of the sections described below:*

- Topic/Question** - should be descriptive and eye-catching
- Background & Goal** - why did you decide to investigate this topic? what are you hoping to learn?
- Methodology** - this should be clear enough so that anyone who reads your description could replicate your survey.
  - describe the population of interest
  - describe your sampling procedure and your attempt to make it representative of the population
  - explain how, when and where you administered the survey
- Questionnaire** - include a blank copy of your survey
- Analysis** - include appropriate graphical and numerical summaries (i.e. bar graphs, pie charts, boxplots, scatterplots, counts, proportions, percents, margin of error, confidence intervals/statements, measures of center and spread, correlation coefficients, LSRL equations, and predictions)
- Interpretation** - discuss what the data tells you about the topic you chose. What did you learn? What generalizations might you draw about the population from which the sample was drawn?

*Your sentences in this paragraph could start with these types of prompts:*

“Some generalizations that we can make are ...”

“The data suggests that ...”

“We found that there is a strong/weak/no correlation between ...”

“We saw the following trend ...”

“The small / large standard deviation of the \_\_\_\_\_ tells us there is a low / high level of variability.”

“The distribution of \_\_\_\_\_ was bimodal / skewed / uniform / normal / random.”

- Pitfalls and Extensions** - share any difficulties you experienced during the survey project. What might you do differently if you were to repeat the survey? How might you have administered the survey differently if you had more time and resources? You should address known sources of bias. Are there any possible extensions of this survey project that might prove interesting?