

15.3.1: Chapter 2 Lab

Creating Graphs from Data (Chapter 2 required)

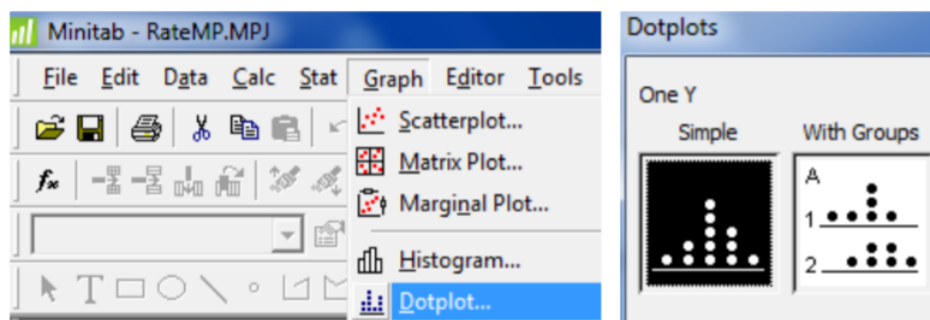
Open MINITAB file lab01.mpj from the website. This data represents information 700 instructors from the popular website ratemyprofessors.com. All instructors are sampled from the Foothill-De Anza Community College District. Here is a description of the data:

College	Foothill or De Anza
Smiley	 Positive  Neutral  Negative
Photo	Instructor has a photo
Hot	 Instructor has a chili pepper
Gender	Male or Female
Dept	Academic Department (example - Mathematics)
Division	Academic Division (example - PSME)
Num	Number of Ratings for that faculty member
Overall	Average Overall Quality Rating (1-5 scale, lowest to highest)
Easiness	Average Easiness Rating (1-5 scale, hardest to easiest)

We are going to use Minitab to make some dot plots for this data. Specifically we are going to look at Average Overall Quality Rating and try to make some comparisons of groups. First, let's ask some questions about this data.

1. Identify the quantitative variables.
2. Identify the categorical variables.
3. Is this an observational study or an experiment? Explain.
4. What is the population?
5. What is the sample?
6. Do you think this is a representative sample of all instructors at Foothill-De Anza? Explain.

Now we are going to make some dot plots of the Average Overall Quality Rating. These can be found under the **GRAPHS** menu command in MINTAB

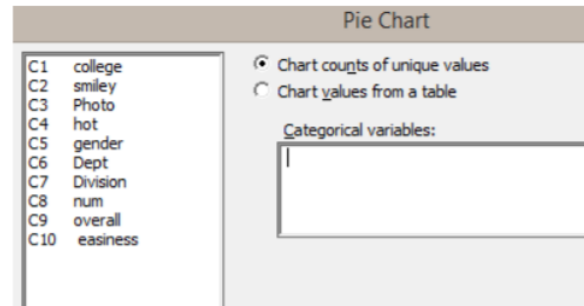


7. Make a dot plot of all instructors' Average Overall Quality Rating. (Simple Dot Plot). Paste the graph here and analyze the dot plot. (Describe the data's shape, center, spread and unusual features)
8. Make a dot plot of all instructors' Average Overall Quality Rating by gender. (With Groups Dot Plot). Paste the graph here. Do you see any difference in overall quality between males and females?
9. Make a dot plot of all instructors' Average Overall Quality Rating by college. (With Groups Dot Plot). Paste the graph here. Do you see any difference in overall quality between Foothill and De Anza instructors?

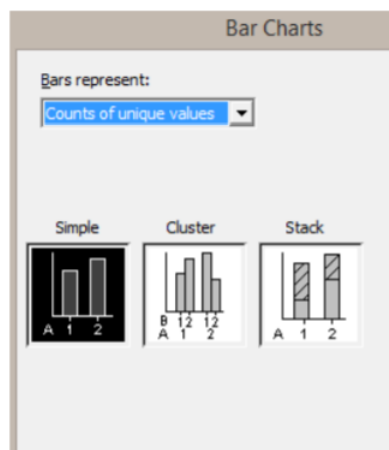
10. Make a dot plot of all instructors' Average Overall Quality Rating by hotness. (With Groups Dot Plot). Paste the graph here. Do you see any difference in overall quality between "Hot" and "Not Hot" instructors?
11. Write a paragraph summarizing your results. Do you see any problems or bias with this study?

To graph categorical data, you can use pie charts or bar charts, both of which can be found on the **GRAPHS** menu command in MINTAB

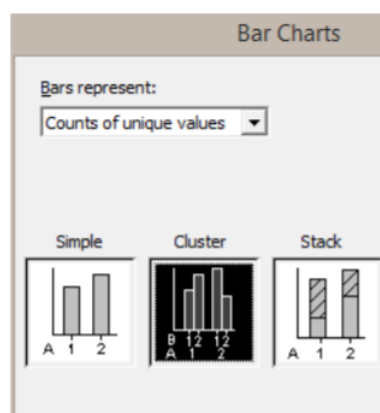
12. Make a pie chart of the categorical variable college and interpret the graph.



13. Make a simple bar chart of the categorical variable gender and interpret the graph.



14. Make a clustered bar chart of the variables college and gender. What does this graph mean?



15. Make a clustered bar chart of the variables hot and smiley. Compare the smiley rating by hotness rating.

This page titled [15.3.1: Chapter 2 Lab](#) is shared under a [CC BY-SA 4.0](#) license and was authored, remixed, and/or curated by [Maurice A. Geraghty](#) via [source content](#) that was edited to the style and standards of the LibreTexts platform.