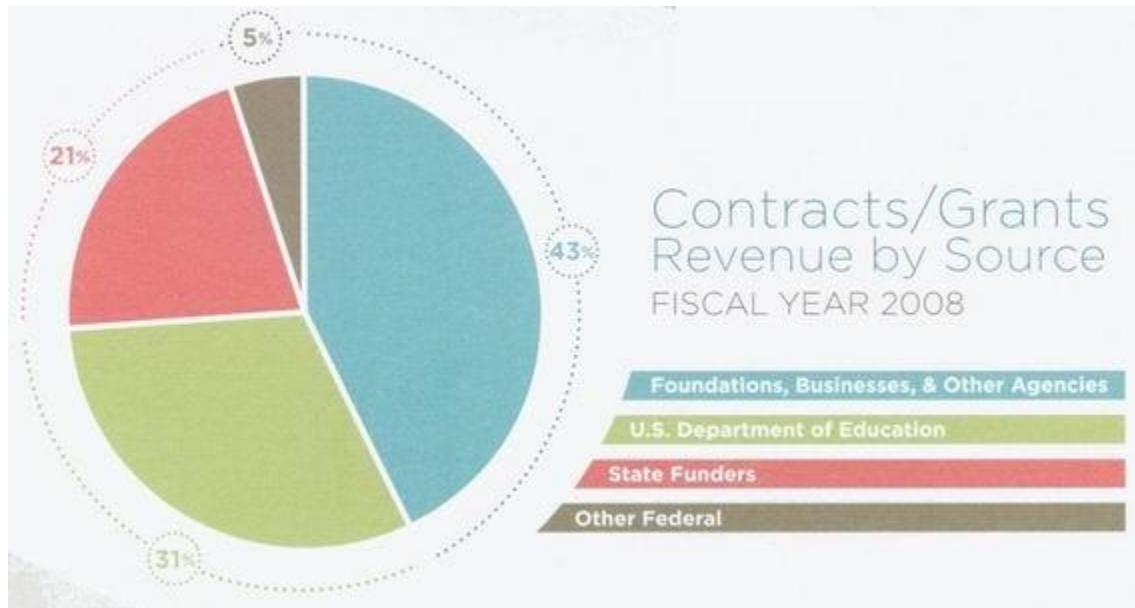


Creating Beautiful Evaluation Results



Source: WestEd

Maybe you have a few hundred public opinion polls, some store surveys, or observations from parks or apartment complexes. It was hard work to collect that data, and now you want to share the results. But how do you do that? More precisely, how do you present the evaluation results in ways that are interesting and engaging?

Edward Tufte, an expert on the visual display of quantitative data, had good reason to name one of his books *Beautiful Evidence*. Each table, chart, graph or map in his book tells an amazing story. With some planning and commitment to simple design, your evaluation results can tell a beautiful story, too.

Why Make Tables and Charts?

Most of the results from your evaluation data can be summarized in the text of your progress reports and final evaluation reports, and in fact sheets, press releases and other documents you use to communicate with community stakeholders. In the case of a public opinion survey, you could write about the number of surveys completed, or how many were completed in each location respondents were recruited into the sample. You could also summarize the survey results on each topic or question, for example, describing the percentage of smokers versus non-smokers who favored smoke-free multi-unit housing.

But there are times when you will want to make the extra effort to create a table or chart to highlight a point that you want to make. Usually, that's a good idea when you want to show particularly interesting, important or unexpected results that really need to stand out. Another instance is when the data are so complex or comparisons so numerous that a visual representation would illustrate the comparison more clearly than mere statistics.

How many tables or figures should you include? Try to strike a balance between giving your readers enough information and not overwhelming them. In a short document like a press release or brief, one table or chart is about right, since this will focus the

Figure 1: Types of Charter Schools Various States Allow²



readers' attention on the main point you are making. In a longer document like a final evaluation report, you can use five to seven figures to illustrate a longer "story" you are telling.

Beautiful Tables

Tables are one way to visually display data. The key is to summarize the raw data into meaningful categories, and to present the results in a way that are clear. The reader should be able to see the table and understand exactly what you are trying to say without reading the accompanying text. Of course, you should still summarize the main results of the table in the narrative section of the final evaluation report.

Here are some key features of a well designed table.

- A title. The title describes what the table is displaying, along with a location and year the data was collected.
- Simple formatting. Edward Tufte recommends using the newspaper, especially the sports section, as a model for data tables. They are simply formatted and designed to communicate effectively to a wide audience.
- Label each column and row, and avoid overlapping categories -- for instance "convenience stores" and "family owned convenience stores" (are these distinct categories, or is one a subset of the other?). Show totals in the last row.
- Always include the total number of people or things you counted. For each category, list the number and percent so the reader can compare across categories.
- Avoid clutter. Footnotes, double lines or images that don't relate to the material distract the reader from the main point of the table.

Use tables rather than graphs if you want to do a comparison of multiple data because few graphs can accommodate such comparisons, and they are very difficult to decipher. Here is an example of a table that shows cities as rows and the number of stores surveyed by year as columns. The table is easy to read and very informative:

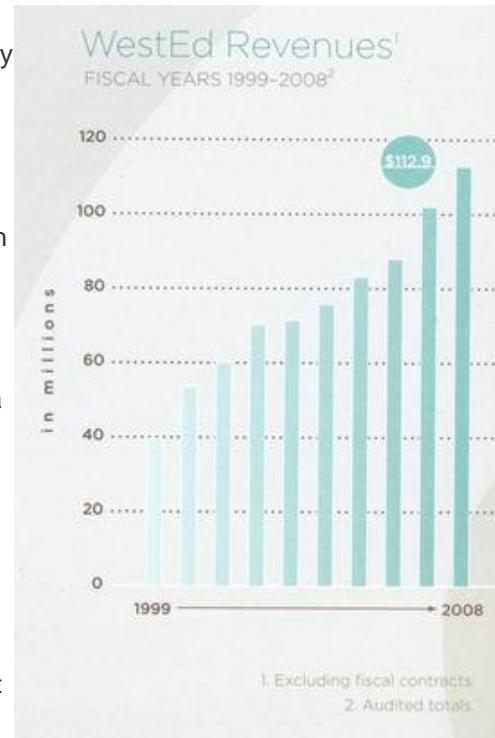
Table 1. Number of Stores Surveyed in 2003, 2005, and 2006 by Area

City	2003 # of stores surveyed	2005 # of stores surveyed	2006 # of stores surveyed
Citrus Heights	15	14	16
Elk Grove	7	10	13
Folsom	8	7	7
Galt	3	3	3
Isleton	3	1	2
Rancho Cordova	10	8	12
City of Sacramento	124	68	144
Unincorporated Area	42	68	53
Total Countywide	212	180	250

Beautiful Graphs and Charts

Charts and graphs serve as "pictures" to illustrate relationships. Some people find them easier to interpret than a narrative description or table in the same way a photograph can portray a thousand words. Some key elements of good graphs and charts are:

- A title. Just as with a table, the title describes what the graph or chart is displaying, along with a location and year the data was collected. If you use multiple graphs and charts, begin the title with "Figure 1" and then number each figure in sequence so that you can refer to them accurately in the text.
- Keep the format simple. Pie and bar charts will probably meet most of your needs. Pie charts show the distribution of a characteristic; bar charts can show that as well as changes over time. Some experts say that it's harder to "see" differences in pie charts than in bar charts. Don't use cones, pyramids, or other shapes, even if Excel allows you to. Unusual shapes, along with three-dimensions, only add clutter and do not communicate any additional information.
- Label clearly so the reader does not have to guess. Each bar or pie slice should have a name and a value associated with it. Bar charts should have labels for both axes. Even if it's obvious to you that you are showing the percent of stores selling to minors, for instance, the reader might not know that. Use a legend if many different categories are displayed; otherwise, there is no need for a legend.
- As with tables, state the total number of people or things you are counting, and the number and/or percent in each category.



For More Information

Edward Tufte's website includes a forum and a schedule of classes he teaches around the country. <http://www.edwardtufte.com/tufte/>. Dr. Tufte's books can be ordered from that website. The books are available free in most university libraries, also.

Just Plain Data Analysis is a book and website hosted by Gary Klass at Illinois State University. <http://iit.ilstu.edu/jpda/>. The website has great tips on formatting bar charts, pie charts and other means of displaying results, along with basics on using Microsoft Excel (2003 and 2007 versions) to create charts and graphs.

TCEC staff are also available to answer questions about the display of data. So contact us!

Beautiful graphics created by WestEd