## What I learned at Edward Tufte's Presenting Data and Information course

**The spirit of inquiry** "whatever it takes to understand". Do not presuppose single method. Knowledge of the content is the premium.

**Content is the King** Integrity, relevance, interest are the content properties. Sentences actually think. There is a certain agency in sentences. Do not dumb down the content. Respect your audience. Use the study hall method; Amazon 6 page memo, "no more Power Point". Stay on content, don't go meta.

**Presenting information** Eye brings in 20MBits/s of data. "people can only remember 7±2 items" rule does not apply to everything – only to nonsensical syllables. Do not become a *chartoonist*. Order by performance, not by alphabet. No more know nothing lines. Every line should indicate – action, causality, dynamics & interconnections.

**How to present information** Use *others*' voice to get the voice of the reporter. Think of yourself as a non-fiction reporter. Use good typography. Graphics can be anywhere numbers can be. Good design is self effacing.

**Data** Avoid cherry-picking data. If it's too good to be true, it probably is. People who use pie charts do not know how to count above five. You should have good knowledge of your own motives, because you know your inner states. Fine tune your "Inner vocabulary". See how measurements are made in the real world. Go to the source of the data gathering. Sampling to please.

**Graphics** Annotate everything. Graphic should be self explaining. *Show me one thing about* \_\_\_\_\_. (Muybridge animal pictures). Use 3D props when you can (Euclid's Geometry book).

**Books** Beautiful Evidence. The Visual Display of Quantitative Information. Envisioning Information. Visual Explanations. They are fascinating. They do not assume that you need to lead by the hand. Topics vary from familiar (Sedgewick's C algorithms) to completely new (fine arts).

**Tools** Avoid proprietary software. Recommends use of D3.js for browser based, self contained visualizations. R for sophisticated presentations. Value open content formats for longevity.

**Sage advice** Cultivate responsibility & pride in work. Have an open mind, not an empty head. Tell the children *how* to get the information.

Further information http://www.edwardtufte.com/tufte/

