Teaching interests and experience

I have taught in a wide range of non-traditional formats: short courses at regional, national, and international conferences, and webinars for a geographically diverse audience. Students in these classes have a choice and will not tolerate a poorly taught class. I take it as validation of my teaching quality that I have been re-invited over and over again to give talks by the same organizations.

I want to highlight three of these talks: Guidelines for Good Graphics, Writing a CAM grant, and Statistics for Medical Librarians. I also want to mention a series of classes I have developed while a part-time faculty member at UMKC.

Guidelines for Good Graphics

Back in the 1990s, before the term "data visualization" came into popularity, I developed a one hour presentation, "Guidelines for Good Graphics," that was so well received that I presented it for almost a dozen research groups. It reviewed the pioneering work of Bill Cleveland and Edward Tufte. A lot has changed since the 1990s, but I have kept current with the recent efforts by Hadley Wickham and Leland Wilkinson that have led to the ggplot2 library in the R programming language.

Writing a CAM Grant

I was fortunate to partner with prominent statisticians with the National Institutes for Health and Palmer College of Chiropractic to give a short course at the International Research Conference on Complementary Medicine in 2012 and 2014. My talks covered selecting an appropriate sample size, pilot studies, and characteristics of a good statistical consultant. We developed small group exercises where each group was given a different research paper and asked to propose a research design that would extend the results of the that paper and form the basis of a new research grant.

Statistics for Medical Librarians

I also had a profitable partnership with a medical librarian and produced a very popular class, Statistics for Medical Librarians, that was taught in an online format and at several regional and national meetings of the Medical Library Association. One highlight of these classes was the use of small group exercises where we showed each group a different research abstract and asked them to interpret the confidence intervals or p-values that appeared in the abstract. Our students really appreciated seeing and having to make sense of statistics as they appear in the wild.

Introduction to R, SAS, and SPSS

I have helped develop many of the classes needed for a new Masters degree program in Bioinformatics. More recently, I worked to develop a series of one credit hour classes with two other faculty members: Introduction to R, Introduction to SAS, and Introduction to SPSS. This was in response to an external advisory panel suggestion that our student would benefit from more experience with programming. These classes cover the basics of data input, data manipulation, simple graphics, and simple statistics. In addition to addressing the advisory panel, these classes allow other classes in our program to save lecture time on these packages and refocus them on additional statistical topics. These classes were originally taught as a live lecture in the computer laboratory but to meet student demands, we converted them into an asyhchronous online format. I am currently working with an expert database administrator to develop a fourth class, Introduction to SQL.