

Addressing Challenges for Teaching Business Statistics

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Presenters and Panelists:

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Abstract: Session will address teaching in large classes, updating course content to ensure that students will be prepared to make sense of data that they will be encountering to guide business decision making, transitioning from having students merely learn a statistical procedure to problem solving and the changing role that introductory statistics courses play in a business program due to the rising use of business analytics. Audience members are encouraged to join in the discussion of these topics.

Session Description:

Pam Burch will present hand-on activities to reinforce concepts when teaching business statistics. She will specifically address the challenges of incorporating activities when teaching in large classes. She will share high-impact, low-cost activities which have worked successfully while using minimal class time. These will include:

- taking a sample from a bag of candy and weighing it (introduces sampling and bias),
- using post-its of different shapes to make histograms, dotplots and stem and leaf plots,
- using post-its to illustrate the birthday problem,
- using bags of pennies to create sampling distributions for proportions (a prelude to simulation and randomization tests),
- the bb-bucket to create confidence intervals for proportions.

Carl Betterton will report on his efforts to update the business statistics course content to provide students with exposure to some of the newer ways to make sense of data that includes data extraction and manipulation, and the use of visualization for easier understanding. When teaching business statistics, it is important to note that business data can be truncated/censored, e.g., with deductibles and limits in insurance, and the data sets can be big (as in "big data") so we want to emphasize larger more dynamic data sets ("big data") coming from all corners of the organization. The aim is to strengthen the ability of our students to use statistical tools in making better managerial decisions, so we want to make the focus explicit, to enhance decision making.

Kim Melton Kim Melton will address some of the ways that the rising use of business analytics has changed the role that introductory statistics courses play in a business program – and the associated practical and ethical issues this introduces to the design of course delivery.

Weiyong Zhang will discuss, “How can we help students make a smooth transition from merely learning a set of statistical procedures to problem solving so they are enabled to apply academic skills to real problem solving?”