



Newsletter of the Section on Statistical Education of the American Statistical Association

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Report from the Chair

Lori Thombs, University of Missouri

Earlier this week, I was reminded of just how much I like the teaching part of my job. Like many others at state institutions, I am regularly sitting in meetings where the not-so-good budget situation is being discussed. We have to figure out how to do more, but with less [funding.] (I once had a Provost who liked to say: “Twenty years ago we were a state-supported public university. Then we became a state-assisted university. Today we are a state-located university.”) These budget discussions are not enjoyable to me, and can put me in a really foul mood.

Such was the case this past Monday. Later that day, heading to my Statistical Consulting course, I was in an enthusiastic, energetic mood, ready to teach “Ethics in Statistical Consulting.” The class was thought-provoking and stimulating. We all laughed together while working through some case studies and even some role playing. And I told myself, “Working with students is so fun and rewarding. I love teaching Statistics!”

Unfortunately, my activities as Chair this year were curtailed by health issues. January through July, I made it through many challenging weeks of recovery from two major surgeries. But I am much better now, thanks to two shiny new hip joints!

Currently I serve on the 2010 Education Workgroup, a committee appointed by ASA president Sastry Pantula and chaired by Jessica Utts. Our charge is “to facilitate a significant discussion

among academic units, industry statisticians, and government statisticians about the preparation of statisticians.” The discussions have been informative and interesting, and a final report is forthcoming. For the next year, ASA President-Elect Nancy Geller has an education initiative that hopes to expand the Summer Institute in Statistics to a larger community. I think it is great that our ASA presidents have initiatives that are directly related to statistical education.

I hope you are having an enjoyable and productive semester. And I wish everyone a festive holiday season.

JSM 2011 Program Report

Danny Kaplan, Macalester College
Program Chair, Section on Statistical Education

Stat Ed will be well represented at JSM 2011 with eight invited sessions! Three recent recipients of the Waller Education Award (Amy Froelich, Jo Hardin, Roger Woodard) will discuss “Outstanding innovations in statistics education.” Joan Garfield has organized a panel to discuss moving “Beyond the Textbook” (Webster West, Christopher Barr, and Rebekah Isaak). There will be a panel on “Using sports data to motivate statistical reasoning” (Robin Lock, Christine Franklin, Vittorio Addona, James Cochran), and another on “Teaching statistics through regression” (Felicity Enders, Shonda Kuiper, Daniel Kaplan, Laura Sather Ziegler).

With co-sponsorship with the Committee on Statistical Graphics, we'll hear about “New Approaches to Computation in Teaching Early Statistics” (Chris Wild, Hadley Wickham, Juergen Symanzik, and Randy Pruim). Rounding out the Stat Ed line-up are sessions on “Real-Life Ethical Dilemmas Encountered in the Practice of Statistics” (which will present resources for teaching about ethics: Jeff Witmer, Katherine Halvorsen, Arlene Ash), and “Training statisticians to solve large, complex, unstructured problems” (Roger Hoerl, Vijar Nair, Geoffrey Vining, organizer Ronald Snee). But perhaps it all comes down to this: “Stat Education: Learning What Works,” a panel organized by Andrew Gelman and featuring Deborah Nolan, Vincent Dorie, and Eric Loken.

There will be additional, contributed sessions sponsored by Stat Ed, as well as a series of Stat-Ed related breakfast and lunch-time round-tables, organized by Michelle Everson. Details on these sessions will be available in early March.

JSM Roundtable Plans

Michelle Everson, Program Chair Elect (gaddy001@umn.edu)

It's that time of year and we need to begin thinking about roundtable sessions for the 2011 Joint Statistical Meetings. Abstracts for roundtables will need to be submitted by late January. If you have an idea about a roundtable you would like to lead, please contact me as soon as you can so I

can provide you with more details about how to officially submit your abstract. Remember that you CAN lead a roundtable in addition to giving a talk at JSM.

I look forward to seeing you all in Miami in 2011!

USCOTS 2011

Deb Rumsey

The United States Conference On Teaching Statistics is May 19-21, 2011!



The fourth biennial United States Conference on Teaching Statistics (USCOTS 2011) will be held on May 19-21, 2011, at the Embassy Suites Hotel in Raleigh/Durham, North Carolina hosted by CAUSE, the Consortium for the Advancement of Undergraduate Statistics Education and North Carolina State University. The target audience for USCOTS is teachers of undergraduate and AP statistics, from any discipline or type of institution. Teachers from two-year colleges are particularly encouraged to attend.

The theme for USCOTS 2011 is “The Next Big Thing!” and will focus on teaching methods and preparation, technologies, resources, and curricular directions on the horizon. USCOTS is a ‘working conference’ with many opportunities for hands-on activities, demonstrations, networking, sharing ideas, and receiving the latest information on research and best practices in teaching statistics. Leaders in statistics education and assessment will give plenary talks, including Allan Rossman, Beth Chance, Dennis Pearl, Wayne Stewart (Auckland, New Zealand), Bob delMas, and Robert Gould. A conference banquet and several pre-conference workshops will also be arranged by CAUSE and will be hosted by SAS on their nearby campus.

We are calling for proposals for the Posters and Beyond (P & B) session for USCOTS. The P & B session provides an opportunity for conference participants to display a poster of their ideas or provide a small demonstration of their favorite examples, activities, and teaching methods. Due to limited space, the P & B session will be limited to 80 presentations. Abstracts for posters or demonstrations in the USCOTS Posters and Beyond session submitted before Tuesday, February 1, 2010 will receive feedback from the session organizers by Tuesday, March 1, 2010. Final abstracts should be submitted by Friday, April 1, 2011. Abstracts submitted between March 1 and April 1 will be considered for selection, but will not receive feedback from the session organizers. Posters and Beyond is a peer-reviewed opportunity at USCOTS, thus the P & B team will make decisions about inclusion in the program. All P & B applicants will be notified whether they were selected by Tuesday, April 19, 2011.

USCOTS breakout sessions look to be as wonderful in ‘11 as they were in the previous three conferences; these breakout sessions are by invitation only and are being selected by the USCOTS Program Committee. Look for more details on the breakout sessions as the USCOTS website continues to grow at <http://www.causeweb.org/uscots>.

Registration for USCOTS 2011, which includes conference lunches and a banquet dinner, is \$160 before April 1, 2011, and \$220 thereafter. There is a \$20 discount for participants from an institutional member of CAUSE. Registration grants are available on a limited basis (does not include hotel and travel) for a limited number of participants for whom the fee would be a burden. Priority will be given to graduate students planning a career in teaching, high school teachers, and to those who participate in the Posters and Beyond session. USCOTS registration will go live shortly after Thanksgiving. When you register for USCOTS 2011 you can submit your abstract for consideration for the Posters and Beyond session and/or apply for a registration grant at the same time.

For more information on the P & B session, contact Jackie Miller at jbm@stat.osu.edu. For information about the USCOTS 2011 program, please contact Deb Rumsey at rumsey@stat.osu.edu. For other issues surrounding USCOTS or CAUSE programs in general, contact Dennis Pearl at Pearl.1@osu.edu.

We look forward to seeing you at USCOTS. Your participation will help the conference be an exciting and rewarding event!

Upcoming CAUSE Webinars

November Activity Webinar (11/23 at 2:30 p.m.): “This Little Piggy Teaches Probability” with Stacey Hancock (Reed College), Jennifer Noll (Portland State University), Sean Simpson (Weschester Community College) and Aaron Weinberg (Ithaca College)

December Teaching and Learning Webinar (12/14 at 2:00 p.m.): “Facilitating Student Projects in Statistics” with Dianna Spence and Brad Bailey, North Georgia College & State University

Journal of Statistics Education

John Gabrosek, Grand Valley State University, Editor

The November issue of *JSE* will feature 13 papers, including one research to practice paper, two Data Sets and Stories papers and three Teaching Bits. **Stefano Barone** and **Eva Lo Franco** discuss the use of a methodology for continual course and program improvement. **Jameel Al-Aziz**, **Nicolas Christou**, and **Ivo D. Dinov** illustrate the use of SCOR Motion Charts for the visual analysis of multidimensional data. The authors walk the reader through the analysis software in a series of videos. **Simin Hall** and **Eric A. Vance** investigate the role of self and peer feedback on student self-efficacy in problem solving. **Bridget Hiedemann** and **Stacey M. Jones** compare student learning from case studies to a service-learning project that involved students in working with a local farmers’ market. **Mary Louise Metz** tackles the important issue of applying the GAISE guidelines and NCTM standards to teaching pre-service teachers. **Jamis J. Perrett** reports on the use of a course disk as an instructional aide. **Lutong Zhou** and **W. John Braun** illustrate the use of the R Grid package in constructing and manipulating graphics. In a research to practice paper, **Franklin Dexter**, **Danielle Masursky**, **Ruth E. Wachtel**, and **Nancy A. Nussmeier** discuss usage of Rice University’s Online Statistics Book as a pre-course review to prepare anesthesiologists and others to take a course in operating room management. Two Data Sets and Stories papers are included in the issue. **Jim Albert** provides three extensive baseball data sets that illustrate numerous statistics concepts. He includes R code for analyzing the data. **Weiwen Miao** analyzes data from the Ricci v. DeStefano court case commonly referred to as the New Haven fire fighters reverse discrimination case. The issue concludes with three Teaching Bits. **Concetta A. DePaolo** provides readers with a how-to guide for usage of the STAT-ATTIC website that catalogues approximately 600 publically available applets. In our regular features, **Audbjorg Bjornsdottir** and **Joan Garfield** highlight interesting statistics education articles from 2010, and **Michelle Everson** and **Ellen Gundlach** report on what’s new with CAUSEweb and MERLOT.

Statistics Education Research Journal

Peter Petocz, Editor

The November 2010 edition of *SERJ* is a special issue focusing on qualitative approaches in statistics education research, with guest editors Sue Gordon and Anna Reid from the University of Sydney, assisted by editor Peter Petocz. The issue consists of eight papers investigating and illuminating various aspects of the theme, preceded by an editorial paper. The papers are:

- Groth, R., Situating qualitative modes of inquiry within the discipline of statistics education research
- Kalinowski, P., Lai, J., Fidler, F. and Cumming, G., Qualitative research: An essential part of statistical cognition
- McGinn, M., Learning to use statistics in research: A case study of learning in a university-based statistical consulting centre
- Casey, S., Subject matter knowledge for teaching statistical association
- Watson, J. and Nathan, E., Approaching the borderlands of statistics and mathematics in the classroom: Qualitative analysis engendering an unexpected journey
- Bihan-Poudec, A., L'enseignement de la statistique : en premier lieu, l'apprenant (Statistical education: Focusing on the learner)
- Green, J., Teaching highs and lows: Exploring university teaching assistants' experiences
- Petocz, A. and Newbery, G., On conceptual analysis as the primary qualitative approach to statistics education research in psychology

The authors of each paper have included specific discussion of the qualitative methodology that they have utilised and its contribution to their research approach. This issue highlights the way in which qualitative methodologies contribute to the discovery of new knowledge by looking around the edges of the research data or making connections between seemingly unrelated aspects.

Technology Innovations in Statistics Education

Rob Gould, Editor

Technology Innovations in Statistics Education (TISE) is the only journal devoted exclusively to research on the connections between technology and statistics education. TISE is a peer-reviewed, on-line journal published through Berkeley Electronic Press. We welcome submissions of empirical research, case studies, or position papers. TISE promises a fast turn-around, and papers are published upon acceptance by two referees, and not on a regularly quarterly schedule. Authors own their own copyrights and can use their own papers in any way they see fit. Authors are also provided with monthly download statistics. Please visit <http://tise.stat.ucla.edu>.

Reading AP Exams at Daytona Beach

Allan Rossman, Cal Poly - San Luis Obispo
Chief Reader, AP Statistics

In 2010 the reading of Advanced Placement (AP) exams moved to Daytona Beach, where 570 college faculty and AP teachers enjoyed the sun, surf, and sand in addition to the grading of more than 130,000 exams. The 2011 AP Reading will also be held in Daytona Beach on June 12-18.

While the prospect of grading exams from 8 am to 5 pm for seven days may not sound appealing at first, this event provides a wonderful opportunity for professional development. College faculty work alongside AP teachers, and both sides learn a lot from each other. Everyone leaves with new ideas about how to teach statistics well and about how to assess student learning.

Much of the professional development and enjoyment come from informal conversations that take place with colleagues and friends throughout the week. There are many planned activities also. The 2010 Reading featured a presentation by Ron Wasserstein, Executive Director of ASA, titled "What Probability and Forrest Gump Teach Us About the Florida Lottery." Several teachers also presented innovative teaching ideas at "Best Practices" night, and presentation on topics that go just beyond the AP syllabus were given by Floyd Bullard, Robin Lock, and Tom Short. The 2011 Reading will feature a presentation by David Salsburg, author of "The Lady Tasting Tea."

Please consider applying to become an AP Reader. You can apply online at:

<http://apcentral.collegeboard.com/apc/public/homepage/4137.html>

Please send any questions to me at arossman@calpoly.edu.

Mark Your Calendar

May 19-21, 2011

United States Conference on Teaching Statistics (USCOTS 2011)
Embassy Suites Hotel, Raleigh-Durham/Research Triangle, North Carolina
<http://www.causeweb.org/uscots>

July 30 - August 4, 2011

Joint Statistical Meetings
Miami Beach, Florida
<http://www.amstat.org/meetings/jsm/2011/index.cfm>

Editors

Comments and suggestions for the improvement of the newsletter are most welcome, and should be sent to a member of the editorial board.

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