

2011 University of California - Online Statistics Instruction

June 24-25, 2011, Berkeley, CA

Logistics

- Meeting: UCOP Online Instruction Pilot Program (UCOP-OIPP)
- Organizers: Dinov, I, Gould, R, de Leeuw, J, Utts, J, Jeske, D
- Date/Time: Fri/Sat, June 24-25, 2011
- Place: Berkeley Marina Double Tree
- Presenter: Ivo D. Dinov, www.stat.ucla.edu/~dinov
- URL: www.socr.ucla.edu/Ed/UC_OSI

UC-OSI Presentation

- **Title:** *University of California - Online Statistics Instruction: Resources, Approach and Challenges*
- **Summary:** This interactive demonstration will illustrate 3 aspects of the new UC-OSI course:
 - some of the resources we plan to utilize in the design, implementation and validation of the efficacy of the course,
 - the pedagogical techniques we will employ,
 - some of the challenges we anticipate in the development and management of the UC-OSI instructional model.

We will go over a specific classroom utilization example and outline some information and communication technologies (ICTs) we plan to use in online teaching and learning of statistics.

- **What is UC-OSI?**
 - *Goals:* increase student access, reduce the costs, and enhance, improve and modernize undergraduate statistics education using available ICTs
 - *Curriculum:* Develop 15 (week-long) data, concept and tool integrated modules for introductory statistics (instructors, refactor these to meet specific audience needs)
 - *Instructional Model:* simultaneous synchronous and asynchronous instruction supported by Adobe-Acrobat-like audio/video stream, virtual office hour (VOH) forum, integrated HTML framework (all components, gradebook and course resources)
- **UC-OSI components**
 - *Tools/Applets:* [Distribution Calculators](#), [Virtual Experiments](#), [Analysis Tools](#), [EDAs](#)
 - *Instructional resources:* [EBook](#), Collaborative Wikis, web-forum
 - *Learning activities:* [interactive, data-driven and technology-enhanced learning activities](#)
 - *Examples:* [Central Limit Theorem](#), [Hands-on California Ozone Data Activity](#)
 - *Data:* Diverse public simulated and research-derived datasets for copy-paste utilization
 - http://wiki.stat.ucla.edu/socr/index.php/SOCR_Data
 - Example: [Latin Letters Frequency Distribution](#)
 - *Dissemination:* open-access CC-BY licensed.
- **UC-OSI Evaluation and Efficacy** (Small-P Eval): We plan to conduct control-based, quasi-experimental and randomized (UC-wide IRB-approved) studies assessing the efficacy of the UC-OSI model. Quantitative and qualitative measures of student performance, resource utilization and instructor feedback will be recorded. Parametric and non-parametric analyses of the data will be employed to analyze cross-sectionally and longitudinally the student performance and perception of the UC-OSI model.
- **Challenges:**
 - Managing large sections (300-1,500+ students (grading, learning, conflicts, etc.), 10-50 TAs, 1-3 Tech personnel, asynchronous communication monitoring, learning assessment)
 - Managing, servicing and archiving of course digital content (materials, activities, discussions, assignments, audio/video, etc.)
 - Efficient capturing, annotating and integrating lectures, VOH forum and other resources.

