

## GUIDELINES FOR PRESENTER MATERIALS

**Please submit the information requested below\* to your workshop listserve by MARCH 22, 2001. By using your workshop's listserve, these materials will be submitted to the PKAL Office and circulated to fellow workshop presenters. These materials will be posted on the PKAL web site and will be used to promote the workshop and for sharing program models with others who may not be able to attend the Summer Institute.**

- At the top of your materials, please provide the following information:

Name: MILO SCHIELD

Title: PROFESSOR

Department: BUSINESS ADMINISTRATION & MIS

Institution: AUGSBURG COLLEGE

Email Address: schield@augsborg.edu

Name of Workshop you are presenting at: SERIES C: SCIENCE FOR ALL

Please provide the following information:

- Title of presentation and 1-2 paragraph description of your presentation (if co-presenting, please submit only one description for the session)

### STATISTICAL LITERACY AND THE SOCIAL SCIENCES

While business, psychology and sociology typically require a course in statistics, many other majors in the professions (e.g., communications, education, social work and nursing) and in the humanities (e.g., English, philosophy, history, the arts) do not. Offering a course in statistical literacy can help students improve their quantitative reasoning skills. To be successful, this approach must have faculty support in the targeted departments so they will recommend that their students take this class. This class must be valued by students since students choose this course as an elective. My experience in designing and marketing such a course at Augsburg College will be presented. This course is housed outside of mathematics in General Studies, is open to being taught by faculty from any discipline, and is focused on critical thinking about statistics as evidence in arguments. Conditional thinking is taught by having students describe and compare named ratios (rates and percentages) in tables and graphs. Contextual thinking is taught by studying data models that take into account plausible confounders. The use of statistics in arguments is taught by studying current essays involving statistics such as "More Guns; Less Crime." This course has been successful for three years. This past spring, 30% of the students in this class said they were "highly likely" to recommend this class to a classmate; 40% said they were "moderately likely", 25% said they were "neutral/didn't know" and 5% said they would not. In a traditional business statistics class, 35% said they would not recommend the class to a classmate. Experiences at other colleges (Harvard, Loyola, etc.) will also be presented.

- list of suggested resources (web and/or print).

[www.fcsn.gov/papers/census.pdf](http://www.fcsn.gov/papers/census.pdf)

[www.augsburg.edu/ppages/~schield](http://www.augsburg.edu/ppages/~schield)

[www.dartmouth.edu/~chance/](http://www.dartmouth.edu/~chance/)

[www.numeracy.org/](http://www.numeracy.org/)

[www.amstat.org/education/ql-projects.html](http://www.amstat.org/education/ql-projects.html)

[www-stat.ucdavis.edu/~utts/describe.html](http://www-stat.ucdavis.edu/~utts/describe.html)

[www.infoeng.flinders.edu.au/asc15/moore.html](http://www.infoeng.flinders.edu.au/asc15/moore.html)

<http://science.ntu.ac.uk/rsscse/activities/terminology.htm>  
[www.swin.edu.au/math/iase/statlit.html](http://www.swin.edu.au/math/iase/statlit.html)  
[www.beeri.org.il/icots6/scientific\\_program/topics/topic1.htm](http://www.beeri.org.il/icots6/scientific_program/topics/topic1.htm)

**a brief bio**

Milo Schield is a Professor and former chair of Business Administration and Management Information Systems at Augsburg College. He has a Ph.D. in Space Physics, a CMA Certificate in Managerial Accounting, and actuarial/operations research experience in the insurance industry. He teaches statistics and critical thinking at both the undergraduate and graduate levels. Dr. Schield is active in advocating and promoting statistical literacy: the use of statistics as evidence in arguments. He has developed a unique course on statistical literacy. With support from faculty in communications and the humanities, he has gotten this course approved as a General Studies course (GST 200) that satisfies the quantitative reasoning graduation requirement. He has given talks on statistical literacy at the American Statistical Association (ASA), the American Mathematical Association of Two Year Colleges (AMATYC) and Making Statistics More Effective in Schools of Business (MSMESB). Dr. Schield presented a paper on Statistical Literacy and Mathematical Thinking at the International Conference on Mathematics Education (ICME-9, Japan, 2000). He is an invited keynote speaker at International Conference on Teaching Statistics (ICOTS-6, South Africa, 2002) where the conference theme is Statistical Literacy.

- a link to YOUR personal home-page  
[www.augsburg.edu/ppages/~schild](http://www.augsburg.edu/ppages/~schild)
- a photo (JPEG format)



Do you grant permission for PKAL to use your presentation materials and photo for PKAL's Web Site and workshop handouts?

Approval:  Yes     No

Date: 13 JUNE, 2001

*If you should have questions regarding the content or the scheduling of your presentation, please contact your workshop leader.*