

Resources for Home District Visits

- Statistical Literacy background piece
- Bill and summary of bill
- Online resources listed at <http://www.amstat.org/outreach/statliteracy/>
- How to “sell” statistical literacy
<http://www.amstat.org/outreach/promotingstatisticalliteracy.cfm>
- Support from Steve through email and conference calls

ASA Home-District Congressional Visits



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The Challenge

“That is why it is not surprising that Dr. Groves' nomination has received strong support from a number of organizations, including the American Statistical Association. I will concede, I did not know that such an organization existed prior to this nominee.”

Senator Collins (ME-R), Senate Confirmation deliberations

Meeting Objectives

- Short-term:
 - Make an “ask”: cosponsor the Statistical Literacy Bill of 2010.
- Long-term
 - Educate staff about statistics and what statisticians do and what we contribute
 - Establish a relationship with an office

Outline

- Challenge and Objective
- Overview of Statistical Literacy Campaign
- Statistical Literacy Bill and supporting argument
- Logistics
- Meeting basics
 - packets

Statistical Literacy Campaign

- Goal: Have statistical literacy promoted in reauthorization of the Elementary and Secondary Education Act (ESEA) – No Child Left Behind
- Why request cosponsors for Statistical Literacy Bill?
 - More cosponsors improves standing for ESEA
 - Opportunity to educate Representative about statistics and statistical literacy

State of Statistics Education

- Not taught by teachers trained in statistics
 - Not teaching statistics
 - Teaching formula/definition, not statistics
 - E.g., Mean, mode, median
 - Probability, not Statistics
 - Missing
 - Context, Interpretation,
 - Statistical problem solving skills (scientific methods, critical thinking)
- Usually not part of assessment

What's Needed

- Teachers Qualified to Teach
 - Teacher training
 - Professional development
- Support of Statistics Education
 - University statistics education programs to train teachers
 - Statistics education research

Support for Statistical Literacy

- Common Core State Standards includes many components of statistics for grades 6-12.
- Achieve, the College Board, and the National Council for Teachers of Mathematics support data analysis and probability as an essential component of mathematics education.
- The Opportunity Equation recommends exploring “the feasibility of offering a mathematics pathway to college for secondary students that is equally rigorous to the calculus pathway and that features deeper study of statistics, data analysis, and related discrete mathematics applications.”

Strong Support for STEM Education

- Private and National Academies Reports (Rising above the Gathering Storm); linked to U.S. competitiveness
- Congressional Support: COMPETES Act; Speaker Pelosi Innovation Agenda
- Administration Support: Obama's Educate to Innovate; Bush's American Competitiveness Initiative

Legislative Environment for Education Legislation

- The Elementary and Secondary Education Act (No Child Left Behind) to be reauthorized in the next year; best vehicle for promoting statistical literacy.
- The House Education and Labor (E&L) Committee and the Senate Health, Education, Labor and Pension Committee are the lead committees for the ESEA reauthorization
- Congressman Loeb sack is a member of the E&L Committee

Statistical Literacy Bill

- If asked about details: Okay to say not fully versed in all aspects of bill but stress why you like the bill
- Preface Material
 - Findings: Definition of statistical literacy and various arguments in support
 - Funding authorization: \$10 million in FY11 up to \$40 million in FY14

Title I: Statistical Literacy Plan

- State must have statistical literacy plan approved by Secretary of Education in order for entities in state to be eligible for funding
- Make-up of State Statistical Literacy Advisory Panel
- General contents of Statistical Literacy Plan

Title II: Professional Development

- Promote statistical literacy through professional development of teachers and educators.
- Grants go to SEA's who then award subgrants to eligible partnership.
- Eligible partnership: LEA plus other entities
- Specifies application requirements, authorized activities and evaluation & accountability plan.

Title III: Statistics Education Grant Program

- Grants from U.S. DoEd to eligible partnership.
- Specifies application contents, authorized use of funds and report contents.

What is the best Argument in Support of Statistical Literacy Bill?

- Factors include
 - Your experience
 - Your Member of Congress
 - Your area
- Use factors to shape best argument from you to your Member of Congress

Statistical Literacy

- Every-day skills
 - Media, medical, business, finance
- Understanding Data
- Decisionmaking, Risk
- Facing Uncertainty
- Enhancing Math and Science Education

See what others think:

<http://www.amstat.org/outreach/promotingstatisticalliteracy.cfm>

- Most of the staffers perceived statistics to just be the making of dry tables of summary numbers. They were all receptive to our clarifying that the field was really focused on critical thinking and methodology for the whole investigate process, from question formulation through data collection, analysis, and interpretation. The staffers all became very interested and shared our concerns over critical thinking skills. They did not realize that was what the profession was all about.

See what others think:

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- very easy and compelling to link statistical literacy (and the implied understanding of risk) to the broader economic collapse and the crises in the mortgage ... industries
- statistical literacy, when connected with getting kids interested in STEM-related careers, economic development, and improving health care, seems to get a positive response

Statistical Literacy

- Definition

Statistical literacy: understanding and using the basic language and tools of statistics, recognizing and being able to interpret different representations of data in a context, and knowing how to ask critical questions about the design and conclusions of a study

- Subset of Quantitative Literacy

Logistics

- Steve will connect you with other volunteers with same representative
- Jointly request a meeting with U.S. Representative in home district
 - Guidance to be provided
- Meet with Member or his/her staff asking the cosponsor bill (August or September)
- Follow up as necessary

Conducting Meetings- Five Steps

- Introduce
- Thank
- Make the “ask”
- Make the supporting argument
- Wrap-up

Action item

- Cosponsor the Statistical Literacy Bill of 2010
 - Could be renamed Statistics Teaching, Aptitude and Training Act (STAT Act) or similar

Visiting Congress: Guidelines

“[Coming to Congress and giving tutorials] doesn’t work. They need to get right to the point: ‘This is why it’s important. I know there are a lot of competing interests, but here’s why we should be at the head of the line. And here’s what it means for society.’”

-Sherwood Boehlert, former chair of House Science Committee, *Science* interview, Nov. 24, 2006.

Conducting Meetings – Musts

- Be on time, be polite
- Have an “ask”
- Break ice but make “ask” early
- Conversational
- Stay on message
- Avoid science details
- Have fun

Conducting Meetings – Audience

- Audience
 - Hill staff influential (and very busy) but can be very influential
 - Who:
 - Supporter? (Member of the “choir”?)
 - House or Senate
 - Committee Memberships (Science? Appropriator? Education?)
 - Leadership?
 - Committee staff or Personal office staff?
- Expect < 25 minutes; probably less (you can ask at beginning)

Wrap Up

- Repeat the “Ask”, Gauge support and Thank them
- Ask if they’d like more information on any thing discussed

Follow-up

- Determine which of you will do follow-up with each office (if more than one of you).
- Email thank you and any additional info; remind of ask
- Keep asking/urging on bill cosponsorship
- If the cosponsor, thank them
- Stay in touch

Precautions

- Don't preach to the choir
 - Present the material as something they can use to make the case to others
 - Do they have suggestions for us?
 - What can we do to help them help us?
 - Okay to have a short meeting
- Don't lecture
 - Shift focus if they lose interest
 - Ask if they have questions
 - Listen carefully to reactions; what works?

Packets

- Leave-behind packets (for Congressional Offices)
 - “Ask” sheet
 - Statistical Significance Documents
 - “Ask” supporting material
 - ASA one-pager

Using the Packets

- Not necessary to use all (use as aid)
- Paraphrase (Don't read material)
- Statistical Significance documents
 - Educating about statisticians and contributions

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- Thank
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Be Adaptable, keep in mind overall goals

ASA Advocacy

- Part of your role:
 - to help research best messages for statisticians
 - Test materials
 - Provide feedback
 - Help shape ASA science policy

Information Gathering

- Staffers = fountain of info
 - Ask questions
 - Ask advice for how to make your case
 - Engage
 - Listen

Congressional Visits: General Approach

- Strong support for Science, Technology, Engineering and Mathematics (STEM) Education
 - Strategy is to get Statistics explicitly included and promoted
 - Not necessarily asking for new programs or separate statistics courses
 - Congressional Visits a start, plant the idea, start the discussion

Summary/Next Steps

- Report high points of meetings to ASA
- Share your opinions/experience for how to promote statistical literacy:

<http://www.amstat.org/outreach/promotingstatisticalliteracy.cfm>

- Represent ASA and Statisticians well!
- Observe reactions
- Have Fun!