Welcome!

Biocomplexity LWI/CC
Designing a Capstone Program for
Recent PhD Recipients
Engaged in Interdisciplinary Research
Sue Weiler, Whitman College
Ron Mitchell, University of Oregon
Tony Michaels, University of Southern California

Supported by
NSF Division of Environmental Biology
EAR-0105201 to Whitman College

Jane Lubchenco 1998
Entering the Century of the Environment:
A New Social Contract for Science

Previous contract: Produce best possible science and
win wars • improve health • enhance the economy

NEW contract: All the above, plus
Knowledge to inform policy and management
decisions.

“Innovative mechanisms are needed to facilitate the
investigation of complex, interdisciplinary problems...; to
encourage interagency and international cooperation on
societal problems; and to construct more effective bridges
between policy, management, and science....”

HISTORY

DISCO  Dissertations Symposia in Chemical Oceanography
• 1977- Present; Inspired by Ed Goldberg, Organized by AIBS

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DIALOG  Dissertations Initiative for the Advancement of
Limnology and Oceanography
• 1993 - Present
• Electronic resources + Symposia
• Interdisciplinary with focus on biology/ecology

DISCCRS  Dissertations Initiative for the Advancement of
Climate Change Research
• DISCCRS I, 1992 - Present
• Interdisciplinary with focus on physical/natural science

Biocomplexity Workshop Goal:
• Add social scientists to the mix,
• Enhance overall experience

DISCCRS: Dissertations Initiative
for the Advancement of
Climate Change Research

C. Susan Weiler
Whitman College
Ronald B. Mitchell
University of Oregon

Sponsors/Advertisers: AGU, AMS, ASLO, ESA
Funding: NASA Office of Earth Science
NSF Geosciences Directorate
EAR-0105201 to Whitman College
Presentation Outline

• Overview of DIALOG and DISCCRS
  *Focus on Symposia

• Lessons learned from
  • DISCCRS I: March 2003

DIAOG/DISCCRS
Symposium Goals

• Establish interdisciplinary peer network
• Enhance Early Career Development

Target

• 0 - 2 years post PhD
• Interdisciplinary Research Careers
• Global

Program Elements

• Webpage
  • PhD Dissertation Registry
  • Demographic data
    Eval/Assessment? Martin Schultz
  • Symposium & Program reports

• Electronic Distribution List

• Symposium

http://aslo.org/phd.html

Symposium Participants

• International (developed & developing countries)
• Most on post-docs or other temporary positions
• Most aspiring to academic positions

Application Package:
• PhD abstract
• 2-page resume
• 2 short essays
• 2 letters of recommendation

Applications reviewed by 6-member committee
~ 40 - 70% success rate

Travel, on-site expenses covered through grants
Symposium Components

- Recent PhD Participants
  - Introductions
  - Oral presentations
  - Poster presentations
  - Group Discussions

- Established PhD Mentors
- Agency Representatives
- Consultants
  - Group dynamics/teambuilding
  - Communication skills

Participant Introductions

Begun to solve last-day-talk problem...

- 2 Minutes
- 1 Image

John Chiang: Professional life as a roller-coaster ride

David Schull: Pictionary

Oral presentations

Goal: Convey research interests/expertise
Content: Ph.D. &/or Current Research, in ‘plenary’ format
Length: 10 - 12 minutes + 3 - 5 minutes Q & A

DIALOG: Spread over 4 days (10, 10, 10, 10)
DISCCRS: Spread over 3 days (10, 20 10)

Suggestions for improvement
- Spread evenly over 4 days?
  - Shorten (5 min.) & condense to 2 days?
- Provide feedback/critiques

Poster Presentations

- Provide in-depth information
- Provides context for informal interactions
- All posters up all week
- ‘Formal’ session in early evening

YES!!
Funding-Agencies and Proposal Development

Web
- Model proposal
- Tips on proposal development

Symposium
- Agency overviews
- Q&A with agency reps

Suggestions for Improvement
- More Agencies represented at symposium
- Alternatives to Federal funding sources
- Working-Group on proposal development

Mentors
- Established physical and social scientists
- Perspectives on career development

Suggestions for Improvement:
- More, more, more!
  - “Mentors’ contributions were valuable as group participants, speakers, and in one-on-one conversation”
- Perspectives on career development and Climate Change
- Schedule Plenary talk(s) on first evening
- Involve mentors more actively in Working Groups
- Less group mentoring
  - ‘Office hours’ for individual mentoring
- Increase number from 2 to 4:
  - Mid- or Senior Social Scientist
  - Mid- or Senior Physical/Natural Scientist
  - Recently Tenured academic
  - Representative from beyond academia; international
- Female Role Models important for both genders

Evening Panel Discussions
Mentors, Agency Reps., Peers
Transition from Student to Professional

- Building Interdisciplinary Careers
- Job Hunting
- First Job
- Proposal Development

Format: Presentations followed by Q&A

Suggestions for Improvement
- Shorten presentations; more Q&A format
- Less group discussion; More time for one-on-one
- Please leave last 3 nights open….
Working Groups

Emerging research, professional, Societal issues

- Topics identified by Application Committee, organizers, participants
- Topics requested before & during meeting
- Topics selected by participants during meeting
- 2 - 4 hours in length

Suggestions for Improvement:
- Wait until symposium to request topics from participants
- Better-defined goal (product vs informal discussion)
- Focus on developing interdisciplinary proposal
- Focus on interdisciplinary case study
- More structure; Use consultants as facilitators?

Communication Skills/Teambuilding

Myers-Briggs Personality Type Indicators in the context of
- Interpersonal communication awareness
- Working Group dynamics

‘Fundamental skill, typically overlooked in education’

Suggestions for Improvement:
- Have consultant present all week (instead of first 2 days) to help with working-group sessions
- More training (facilitation skills; managing students, staff; time management; mentoring, leadership skills)
- Many wanted individual critiques of their oral presentations

Communicating beyond Academia

SeaWeb
Message-in-a-Box

‘Excellent skill that we need’

Suggestions for Improvement:
- More small-group or 1-on-1 training
- Reading material/assignment before symposium
- Invite reporter to symposium

What Next?

- Add Social Science to the mix
- Optimize symposium given time and financial constraints
Location, Location, Location

- Isolated
- Relaxed
- Pleasant

- Internet
- PowerPoint
- Posters

- Cost-effective

DISCCRS Statistics

DISCCRS: 200 submitted abstracts, 72 applied for symposium
- 40 countries represented
- 51% PhD degrees from U.S. institutions
  - American citizens:
    - 48% male, 52% female
    - 9% underrepresented minorities

DIALOG V: 447 submitted abstracts, 218 applied for symposium
- 49 countries represented
- 51% PhD degrees from U.S. institutions
  - American citizens:
    - 54% male, 46% female
    - 9% underrepresented minorities